Peace and Security Review

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Editors Note

The 21st century experiences diverse global issues, differing regionally and state-wise as well. The South Asia region is the contemporary hotpot for diplomacy and connectivity, with a keen eye from China looking to improve trade, political and development relations. Hence, the strengthening of people-to-people connectivity is crucial for China to enhance relations with South Asia. At the same time, climate is one of the most pressing issues in the world today, with India, being a country of more than 3 million square kilometers and consisting a majority of the population dependent agro-based food, climate change induced food security in the country is likely to have both domestic and regional implications. One of the most concerning issues in the region today is the inhumanity conducted towards the Rohingya Muslim minority, driven through the Buddhist-Burmese nationalism rampant throughout Myanmar. And amidst all these concerns, there exists an inherent tension between establishing justice and securing peace in contexts of conflict, especially applicable for international legal organizations. By covering an array of pressing issues, this review gives a flavor of contemporary crises and opportunities to make a better tomorrow.

The first article, titled "China and South Asia: People-to-People Connectivity for Common Destiny", by Major General A N M Muniruzzaman, ndc, psc (Retd) focuses on the people-to-people exchange aspect of China's relationship and its build-up with South Asia. It stresses the historically important idea of 'common destiny' of neighbouring states, which was espoused at the 18th National Congress of the Chinese Communist Party, and how the bold concept has grown deep roots in Chinese domestic and foreign policy towards South Asia. China and South Asia's relationship can be defined by mutually reflective orientations, based on the fundamentals of peace, development and win-win cooperation directed to lead to a shared future of lasting prosperity and sustainable growth for the community and for humanity in general, and hence, demands people-to-people exchange as it is critical to fortification of and reaffirmation of a collective identity of the neighbourhood, so that

all constituent countries orient themselves to the pursuit of the common destiny. Firstly, it looks into the historic analysis of people-to-people bond as a part of the heritage of the China-South Asia relations, and focuses on the constant flow of populations along the historical Silk Road, which allowed the confluence of diverse ways of life since early years of civilizations. The paper also assesses the possible scopes for greater people-to-people connectivity in the contemporary landscape, as well as exposition on the major challenges to improved relations people-to-people relations for the future of China and South Asia.

The author of the second article, titled "Food Security in India: Threat Mapping Impact of Climate Change", Sourina Bej, highlighted the impact of food security in face of the 21st century issue of climate change. Highlighting the vast size of territory and the significant proportion of the population dependent on food from agriculture, the author focuses on the various implications of climate change on food security, water security and displacement in the country. The article revolves around India's historical trends in temperature, rainfall, extreme events, issues of land degradation and desertification and food security vulnerability to climate change in agro-ecological zones. This qualitative base research is a part of a project titled Threat Mapping: Water Security, Food Security and Human Displacement: Impact of Climate Change in India" that aims to identify causes of food security, water security, and human displacement due to climate change.

With a focus on the inherent tension between the enduringly irresolvable "peace vs. justice debate", the next article, "Beyond Peace vs. Justice: The Coming of Age of the International Criminal Court", written by Ms. Aisha Binte Abdur Rob, addresses the overarching question as to the extent to which the International Criminal Court (ICC) can contribute to peace. The articles revolves around the critical analysis of two assumptions that undergird this inquiry: the first assumption holds there is some contribution that the ICC can make in this regard, and second, that it is desirable that such contribution be made. In this analysis process, the article, firstly, brings attention to the ability of the international legal organization to contribute two both positive and negative peace. The author then inquiries into whether the ICC should contribute to peace, given that it does not give the basis of any domestic courts. The overarching contributions of ICC to both negative and positive peace, to an extent, is essential, as is elaborated in this segment of the analysis.

"The Dream of the Buddhist-Burmese Nation-State: No Place for the Rohingya Community", written by Ms. Nahian Salsabeel. The paper is focused on the link of Buddhist-Burmese nationalism and the influx of Rohingya refugees all

over the world. It firstly deals with the definition of jingoism, which would set the centerpiece of the paper. It then moves onto cover the controversial issue of granting the Rohingya refugee entitlement, marking the violent plight conducted against them and the fulfillment of the only international legal criteria that defines refugees, given by the 1951 UN Convention Relating to the Status of Refugees (Geneva Convention) and the 1967 Protocol Relating to the Status of Refugees. The paper also traces the historical trends of oppressive policies used against the Rohingya, as well as the use of the tool of 'Burmanization', in cases of both the Rohingya humanitarian crisis and for the rest of Myanmar.

This review navigates through diverse international issues, as well as pathways for opportunities through the lens of Asia. As the world witnesses changing global relations, domestic and foreign policies of states continue to morph and adapt according to requirements thrown at them by both state and non-state actors, and other international concerns. With a dynamic multidimensional flavor, the review covers a variety of security, economic, political, developmental, social, etc. aspects of international politics practiced in the Asia region, as well as the global context, by international actors.

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Editor

China and South Asia: People-to-People Connectivity for Common Destiny

Major General ANM Muniruzzaman (retd)[1]

Abstract

Based on the concept of 'common destiny', people-to-people exchanges have been considered as a crucial element to the Chinese foreign policy to South Asia. People-to-people interaction is essential for the fortification and reaffirmation of a collective identity of the neighbourhood in order for them to align themselves to the aim to achieve the common destiny. Development of stronger people-to-people bonds can result to easier exchange of information, greater opportunities for economic integration, augmented cross-border education and training, as well as employment prospects, increased tourism and so on. The vast and diverse cultures of South Asian countries also provide fertile ground for research activity for Chinese scholars, potentially leading to the reincarnation of the historical Orientalist civilization. The historical bonds that connect the peoples of China and South Asia offer much inspiration in navigating this new course towards a shared future. With a focus on China's growing influence in the South Asia, this article will look into the importance of formation and strengthening of people-to-people bond for improved China-South Asia relationship and to benefit from the new advantages that development from this strengthening. It will also emphasize the contemporary avenues and the challenges of enhancing people-to-people connectivity between China and South Asia.

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1. Introduction

The vision of a common destiny of neighbouring States was first conceived by China, as espoused at the 18th National Congress of the Chinese Communist Party. This vision of a community of common destiny has since taken deep root in the foreign and domestic policy outlooks of China's South Asian neighbours. Conviction in and commitment to such a bold vision stems from the shared memory of the rich trail of intertwined history between China and South Asia that dates to the original Silk Road trade routes of the Han Dynasty (207 BCE – 220 CE).[2]

The ancient Silk Road remains a vibrant source of wisdom for China and South Asia's regional geopolitics. Through cross border trade and cultural cross-pollination, the original Silk Road established relationships of mutual respect and trust.[3] In contemporary times, China is advancing a neighbour-centric foreign policy which is centred on building a community of common destiny with its neighbouring countries, principal among them being the states of South Asia.[4] The cornerstone of China's neighbourhood diplomacy is thus long-term harmony and cooperation with neighbouring countries.[5]

In this new era of international relations, China and South Asia have adopted mutually reflective orientations that are based on the fundamentals of peace, development and win-win cooperation that can lead to a shared future of lasting prosperity and sustainable growth for the community and for humanity in general.[6] The concept of 'common destiny' necessarily emphasises the commonalities between the countries in the region and prioritises of forging of constructive nexuses between these countries so that joint ventures can yield mutual benefits. Hence, connectivity is integral to the operational strategy for realising the vision of common destiny.

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[2]   Mark Joshua J. "Silk Road, Definition". Ancient History Encyclopaedia. http://www.ancient.eu/SilkRoad/ (retrieved April 03, 2019)

[3]   Rayila, M. "The pain of a Nation: The invisibility of Uyghurs in China Proper." *The Equal Rights Review* 6 (2011): 44-57.

[4]   Mardell Jacob, "The 'Community of Common Destiny' in Xi Jinping's New Era." The Diplomat, October 25. 2017. https://thediplomat.com/2017/10/the-community-of-conmon-destiny-in-xi-jinpingsnew-era. (retrieved April 01, 2019)

[5]   "Xi Jinping visited Vietnam and Singapore: Community of Shared Future Starts with the Neighbourhood," November 10, 2015, http://fj.people.com.cn/n/2015/1110/c181466-27058231.html. (retrieved April 03, 2019)

[6]   Yi Wang. "China's Diplomacy in New Era: Opening up New Horizons with a New Outlook" 68 *China International Studies* (2018): 5-25

Strengthening physical connectivity between China and South Asia has been a priority for the region. Connectivity across land facilitates infrastructural development and economic growth. However, as some scholars contend, if the community of shared future is to be realised, common interests, security and culture must be re-converged.[7] Hence, for common prosperity, it is imperative to enliven the spirit of mutual respect, trust, inclusiveness and learning. People-to-people connectivity fosters mutual trust and cohesion which is necessary for sustained cooperation and enduring collective prosperity.[8]

The constant promotion of people-to-people exchanges is critical as is the fortification and reaffirmation of a collective identity of the neighbourhood, so that all constituent countries orient themselves to the pursuit of the common destiny.[9] Stronger people-to-people bonds can be sought through increased cooperation in the spheres of education, culture, science and technology.[10] Greater emotional and psychological integration of the peoples of the region will be possible as cultural, artistic, religious, scientific and technological connections flourish between these nations.[11] There are immense prospects for educational cooperation, as well as adventure and pilgrimage tourism. The vast and diverse cultures of South Asian countries also provide fertile ground for research activity for Chinese scholars, potentially leading to the reincarnation of the historical Orientalist civilisation.[12]

Enhanced people-to-people connectivity between China and South Asia is both of intrinsic value to the states and a means of ensuring fluid flow of information, scoping of market potential within and beyond the region, generating demand, providing employment, increasing consumption and boosting investment. The shared history of the region is testament to the many

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[7] Zongyi Liu. "Community of Shared Future for Asia: Connotations and Ways to Build" *China International Studies* 4 (2015) 48 -51.

[8] Kennedy Scott and Parker David, "Building China's One Belt, One Road" Centre for Strategic and International Studies" (April 3, 2015). http://csis.org/publication/building-chinas-one-belt-one-road (retrieved March 30, 2019).

[9] Shengli Ling. "Building a Community of Common Security: China's Approach to Its Neighbourhood" *China International Studies* 68 (2018): 44-67

[10] Hao Deng. "Prospects of the Shanghai Cooperation Organisation after Membership Expansion." *China International Studies* 72 (2018): 25-37

[11] Yuanying Pei. "China's Diplomatic Strategy and Peaceful Development: Opportunities and Challenges" *China International Studies* 2 (2006): 116-129

[12] Sangroula Yubaraj. "China South Asia Connectivity: Reflections on Benefits of OBOR in Nepal from International Law Perspective" *Kathmandu School of Law Review* 5(1) (2017): 1-38

avenues for people-to-people connectivity, including trade, religion, cultural exchange, tourism and education.

This paper offers an analysis of the potential for people-to-people connectivity between China and South Asia. The analysis is divided into six sections. Following the introduction, the next section will briefly trace the heritage of the people-to-people relations of the people of China and South Asia, identifying the major historical arenas for interaction and interchange. In the third segment, the paper will assess the contemporary landscape and evaluate the scopes for people-to-people connectivity in the region. The fourth section will provide an exposition on the major challenges to improve people-to-people relations for the future of China and South Asia. Recommendations for expanding and developing the spheres of connectivity form the subject of the fifth section. The sixth and final section briefly summarises the key points of salience and reaffirms the paper's core propositions for ameliorating connectivity.

History of Regional People-to-People Connectivity

The constant flow of population along the historical Silk Road allowed the confluence of diverse ways of life, including the intermixing of the values, ideas and experiences of the peoples of China and South Asia. The annals of the history of the Silk Road are repleted with narrations of the rich trade links between China and South Asia. The enhanced trade in those ancient times ensured cohesive and dependable relations among the people of the region which, in turn, strengthened the educational and spiritual bonds and increased the intellectual and cultural exchange between China and South Asia.[13]

The regional history is also imbued with the legends of religious luminaries travelling from one land to another. There is a plethora of historical religious ties between China and South Asia. The intermingling of religious traditions was mediated by Buddhist monks who travelled from China to South Asia. There was also exchange of religious leaders in the region as, for instance, Atish Dipankar used to visit China frequently. China received Nepalese *Dhyana* Buddhism through the travels of Fa Xian (405 CE), Yuan Chuan (613 - 632 CE) and Xuan Zang (629 - 643 CE). Missions were sent from China to Nepal and this was also reciprocated from Nepal. The intensity of this regional religious transference is evinced in the fact that today *Ch'an* (*Dhyana* as pronounced in

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13 Yubaraj Sangroula, "China South Asia Connectivity: Reflections on Benefits of OBOR in Nepal from International Law Perspective" *Kathmandu School of Law Review* 5(1) (2017): 1-38

Chinese) Buddhism ranks among China's official Buddhist faiths.[14] Buddhism and Islam were thus exchanged between the different Empires.

As has been widely written of the history of the Silk Road, it was as much a cultural highway as it was a trade route.[15] A cornucopia of tangible and intangible of cultural goods were transferred throughout the region, including food, medicine, technologies, religions and fashions, along with various forms of arts, dance and music.[16] This vibrant diffusion and intermingling of cultures forged strong bonds of mutual trust and affinity.

Hence, trade itself was a catalyst for building closer ties across nations. The transference of religious traditions and spiritual thought was another avenue for Chinese and South Asian interaction and engagement. The transmission of culture was perhaps most vibrant and diverse amongst these countries and facilitated mutual appreciation and friendship most effectively. The history of connectivity is not only limited to the transfer of tangible goods and intangible ideas, but extends to the travels of people who physically exported their ways of live, values and outlooks to varied destinations across the regions, establishing links and enhancing connectivity, whether for the purposes of trade, tourism or education.

3. Contemporary Avenues for Enhanced Regional Connectivity

The contemporary nexus between China and South Asia is being forged by the Belt and Road Initiative (BRI). The BRI is a vision guided by the core elements of Beijing's present foreign policy which accords centre-stage to strengthened bonds, greater growth and development along the length of its geographical perimeter.[17] Building on the foundations of the ancient Silk Road, the BRI will establish an extensive network drawing together China, Central Asia, Russia and Europe, connects China with the Persian Gulf and the Mediterranean Sea and links China with South Asia, Southeast Asia and the Indian Ocean. This modern Maritime Silk Road establishes a mammoth trade circuit by connecting major sea ports, spreading from China to the South China Sea and

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14 Michael Brannigan, *The Pulse of Wisdom*, (Wadsworth/Thomas Learning, 2000), 31-33.

15 Vadime Elisseeff, *The Silk Roads: Highways of Culture and Commerce*, (New York: UNESCO, 1998), VIII.

16 Susan Whitfield, *Life Along the Silk Road*, (Oakland: University of California Press, 2015), 3.

17 Swaine, M. D. (2014). "Chinese Views and Commentary on the "One Belt, One Road" Initiative." China Leadership Monitor. http://www.hoover.org/research/chinese-views-and-commentary-periphery-diplomacy (retrieved April 03 2019)

Indian Ocean on the one side and through the South China Sea to the South Pacific on the other. [18] Thus, essentially, BRI constitutes a set of maritime and land-based corridors connecting European and Asian markets in a cooperative and mutually beneficial new paradigm.

BRI is undergirded by both economic and non-economic principles. Through the alignment and coordination of development in the region and within individual countries, BRI pledges to strengthen people-to-people relations, promote culture exchanges and generate mutual understanding between these diverse peoples.[19] Hence, the BRI is an intercontinental scheme that will bind Asia, Europe and Africa along with their neighbouring oceans in an all-dimensional and multi-plane framework of connectivity. The pre-eminence of regional people-to-people connectivity in China's foreign policy and domestic-economic vision has deep philosophical roots. The multiple bilateral agreements China is forging with countries in the region are premised on a foundational assumption that the BRI vision can only be realised if mutual understanding is instilled in the different countries engaged in the mega-project.[20] This is inspired by the Confucian ideology of leadership by virtue and established morality which calls on the ruler to recognise and uphold the self-respect of the ruled.[21]

In order to realise the economic and infrastructural objectives of China's engagement with South Asia, effective and meaningful people-to-people connectivity is now recognised as indispensable since expressions of goodwill at the high echelons of governance do not necessarily transmit down to supportive sentiments at the ground level and China's soft power has been relatively underdeveloped thus far.[22] Concrete steps towards enhanced people-to-people connectivity have already been taken.[23] With the substantial

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18 "Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road," March 2015, http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html. (retrieved April 04 2019)

19 Wu, H. X., "Rethinking China ' industrialization: Economic explanation of roles of the state and government" 75 (2014): 1-23.

20 Jianfu Chen, *Chinese Law: Context and Transformation* (Brill, Nijhoff 2008), 10

21 Derk Bodde and Clarence Morris, *Law in Imperial China: Exemplified by 190 Ch'ing Dynasty Cases (Translated from the Hsing-an Hui-lan) with Historical, Social and Juridical Commentaries)* (Harvard U. Press, 1967).

22 Schuman Michael. "China's New Silk Road Dream" Bloomberg Business Week (Nov. 25, 2015).   http://www.bloomberg.com/news/articles/2015-11-25/china-s-new-silkroad-dream (retrieved April 05, 2019)

23 Shiwei Lu, "China's Diplomacy in the New Period: Changes and Consistency" *China*

progress that has been made with the BRI in concrete terms, China is looking to amass soft power in order to enhance international cooperation and set the mould for public opinion.[24] This is being pursued through increased theoretical research and measures to influence public discourse. It is well-recognised that the long-term infrastructural and economic ambitions of the BRI can only be fulfilled through increased people-to-people connectivity that fosters mutual trust and willingness to converge efforts for common prosperity.[25]

Aligned with this broad strategy, there is now a contemporary revival of historical ties. Trade and people-to-people relations are integral to this new scheme of regional connectivity.[26] The present drive towards increasing connectivity stems from an ideological commitment to common prosperity of China and South Asia. The historical narrative that economic and cultural connectivity can foster mutual trust has been eagerly adopted by countries plagued by instability both within and beyond their borders. People-to-people bonds constitute one of the core components of the Belt and Road Initiative and the strengthening of these bonds may be pursued along a number of dimensions.[27]

Trade is a principal dimension for enhanced people-to-people connectivity. The alignment of different countries' development plans will facilitate the achievement of balanced and variegated sustainable development.[28] In terms of trade relations, South Asia is one of China's most prominent neighbouring regions. China enjoys robust economic links with South Asian countries and these links have been flourishing exponentially in the 21st century. As an illustration, bilateral trade burgeoned from 6.5 billion USD in 2001 to 73.9 billion USD in 2012.[29] Hence, China's rise in regional trade with South Asia

International Studies 40 (2013): 37-60

24 Huang, Y P. "Understanding China's Belt & Road Initiative: Motivation, framework and assessment" *China Economic Review* 40 (2016): 314-321

25 James Kynge, Arthur Beesley & Andres Byrne, "EU Sets Collision Course with China over 'Silk Road' Rail Project," Financial Times (February 20, 2017) https://www.ft.com/content/003badl4-f52f-Ile6-95eefl4e55513608 (retrieved April 03 2019)

26 Francis Cheung and Alexious Lee. " A Brilliant Plan, One Belt, One Road" CLSA (2015). https://www.clsa.com/special/onebeltoneroad/ (retrieved April 02 2019)

27 Kennedy Scott and Parker David, "Building China's One Belt, One Road" Centre for Strategic and International Studies" (April 3, 2015). http://csis.org/publication/building-chinas-one-belt-one-road (retrieved March 30, 2019).

28 Wang Yi, 'China's Diplomacy in New Era: Opening up New Horizons with a New Outlook' (2018) 68 *China International Studies* 5-25

29 Zongyi Liu, "China's Economic Relations with SAARC: Prospects and Hurdles" *China*

far exceeds even its overall increase globally. Despite the growing economic exchanges between China and South Asia, economic integration in this region is far weaker than between China and other regions, such as Southeast Asia.

There is thus tremendous potential for greater economic integration between China and South Asia. The region is physically bound together by mountains and waters and economically connected by the mutual attraction between China's rapidly expanding economy and massive consumption market on the one hand and South Asia's untapped reserves of natural and human resources on the other. Economically integrating China and South Asia would build a mammoth market comprising 2.8 billion people, propelling economic development forward in China, South Asia and the wider world.[30] As Chinese capital increasingly "goes global" and Chinese economy undergoes restructuring, it is expected that the more labour-intensive industries will be relocated abroad. The sheer size of South Asian countries and the geographic advantages they offer make them prime choices for this relocation. This would potentially create scope for mass employment in these countries.

Cultural diffusion and exchange offer a non-pareil scope for enhancing people-to-people connectivity. Greater cultural exchange is already being fostered through intergovernmental agreements that facilitate cultural communications.[31] The Silk Road International Arts Festival, Silk Road International Film Festival and cultural exhibitions are all initiatives for cultural cross-pollination. Cultural films and visual media can inspire greater cultural exchange. A further possibility for enhanced cultural exchange would be broader and more wide-ranging intergovernmental agreements on cultural exchange.

Revival of silk roads will establish an expansive network for heritage preservation.[32] Inter-civilizational exchanges will be mediated through the establishment of museums, expos, festivals and other initiatives for the confluence of cultures. Greater cultural exchange should be pursued across the full array of possible platforms including print media, internet, video, micro-

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International Studies 48 (2014): 112-131

30 Zongyi Liu, "Community of Shared Future for Asia: Connotations and Ways to Build," *China International Studies* 4 (2015): 48 -51.

31   Dalton Lin. "Exclusive: "One Belt, One Road" and China's International Relations" US-China Perception Monitor (Mar. 21, 2016). http://www.uscnpm.org/blog/2016/03/21/one-belt-one-road-and-chinas-internationalrelations/ (retrieved April 02 2019)

32 Hofman Bert, "China's One Belt One Road Initiative: What We Know Thus Far" The World Bank (Dec 4, 2015). http://blogs.worldbank.org/eastasiapacific/chinaone-belt-one-road-initiative-what-we-know-thus-far (retrieved April 07 2019).

films and exhibitions raise awareness regarding livelihood projects that have had beneficial socioeconomic impact, so that the understanding and support of local populations can be garnered.[33] Many countries and cities within the ambit of the BRI will gain immensely from promoting cultural nationalism and their own distinct civic identities. Xinjiang, Urumqi is exemplary in this regard, as initiatives to promote the culture of this locality have tremendously boosted its tourism sector.[34]

Stronger people-to-people bonds may also be developed through increased religious transference as well. The construction of the Trans-Himalayan corridor under the BRI project will open a new horizon for China's engagement with South Asia and, in particular, with Nepal, India, Bangladesh and Bhutan. Western China is a nucleus of Buddhism and with the establishment of a land-based route will produce mass movements for pilgrimage and spiritual gatherings from western China to South Asia.[35] Such religious connections will forge and strengthen a greater array of cultural bonds among the peoples of the region. The sizeable population of Chinese Buddhists can engage directly and conveniently with the Nepalese Lumbini and Indian Buddhist shrines. These connections will certainly generate more communication and trust among the nations.

Tourism offers a burgeoning sphere for people-to-people connectivity. In the period between 2016 and 2020, approximately 85 million trips are projected to be made from countries under the BRI to China.[36] Tourism exchange is being promoted in 34 countries across the Belt and Road region through bilateral tourism events.[37] The sphere of sports tourism is a rapidly expanding forum for increased people-to-people connectivity. It is expected that by 2020, approximately 15% of the total number of all leisure tourists will be travelling across the BRI region for sports tourism. China has already reached visa

33 Mengzi Fu and Gang Xu. "New Silk Roads: Progress, Challenges and Countermeasures" *China International Studies* 65 (2017): 86-98

34 Suk Ha Chan Grace, Lai Fun Tang Irini and Wenxian Zhang Mosa. "Perceptions of Residents in Xinjiang, Urumqi towards Tourism Development through China's Belt and Road Initiative" *Journal of Management and Sustainability* 8(1) (2018): 59-74

35 Sangroula Yubaraj. "China South Asia Connectivity: Reflections on Benefits of OBOR in Nepal from International Law Perspective" *Kathmandu School of Law Review* 5(1) (2017): 1-38

36 Tourism exchanges increase via Belt and Road Initiative: http://www.xinhuanet.com/english/2017-05/13/c_136279676.htm (retrieved April 01 2019)

37 Action Plan on Development of Belt and Road Sports Tourism (2017-20): https://eng.yidaiyilu.gov.cn/zchj/qwfb/35983.htm (retrieved April 01 2019)

waiver agreements with 46 countries in the BRI region and Chinese citizens are granted visa upon arrival in 19 countries along the BRI routes.[38]

Therefore, tourism has immense potential for increasing people-to-people connectivity in the region.[39] Cultural tourism is a relatively unexplored avenue. Tourism promotion can be advanced through both governmental and non-governmental channels. Sports tourism probably has the greatest capacity to strengthen people-to-people bonds. Thus far, the tourism sector has received inadequate attention in this region. Its potential can be realised through training and exchange programs that develop all aspects of the sector, including the design of tour packages, tour guides, prospects for adventure tourism and international internships.

Greater youth participation is recognised as being central to regional connectivity and a number of programs are being undertaken to strengthen the role of the youth. These include youth collaboration for sustainable development and Belt and Road Teenager Science Camps. Training programs are being undertaken in the fields of heritage restoration and museum management with 150 youth trainees being instructed so that they can go on lead these sectors. Likewise, the Ministry of Culture and Tourism has initiated training programs for young sinologists that has drawn 360 participants from 95 countries.[40]

Youths are vital to the future of China and its neighbours and policy instruments should thus reflect the views and concerns of the youth. In order to develop and promote youth leadership, a dedicated youth centre of regional scope may be established. Youth camps, mediated by the collaboration of governments and private institutions, would facilitate greater mutual understanding of cultures. Hence, throughout the region, youths can act as agents of change.

People-to-people relations should also be pursued through enhanced cooperation in the domain of education and scholarship. The number of international students in China is progressively rising. China currently receives over 1000 students from 109 countries. The BRI offers 300 research platforms that span all the countries in its ambit, including the countries of South Asia. Over 10,000 students can study in China, availing the Silk Road scholarship.

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38 Ge Su, "The Belt and Road Initiative in Global Perspectives" *China International Studies* (2016) 57 5-27

39 Pan Zhiping, 'Silk Road Economic Belt: A Dynamic New Concept for Geopolitics in Central Asia' *China International Studies* 47 (2014): 33-43

40 Safford Lisa. "Cultural Heritage Preservation in Modern China: Problems, Perspectives, and Potentials". *ASIANetwork Exchange* 21(1) (2013): 1-13

China established 66 Confucius Institutes and 32 Confucius Classes by the end of 2012 and exchange students numbered at approximately half a million. Personnel contacts between China and South Asia exceed 30 million person times.[41]

Scholarship programs build stronger ties between students and other people engaged in these cross-country programs.[42] Increasing interfaces for interaction facilitates the development of mutual regard and friendship. More scholarships, exchange and collaborative programs should be offered by China to countries in the region. Collaborative research initiatives may also offer excellent opportunities for intellectual and cultural exchange. With increasing learning from one another, there will be scope for greater mutual social-cultural understanding and appreciation. Language barriers must be overcome in this regard through dedicated programs for improving proficiency in the use of regional languages.

Extending from the sphere of education, there is broader scope for intellectual exchange through collaboration between institutions of research, scholarship and strategic expertise. Think-tanks have a crucial role to play in facilitating greater connectivity between the peoples of the region. From increased information exchanges to constructive insights for designing policy and establishing mechanisms, think-tanks can expedite the transference of ideas that will facilitate conceptual and operational unity across states. At present, studies are already being conducted and a substantial body of research has been published by 50 renowned think-tanks. Connectivity, and thereby improved people-to-people relations can be achieved through initiatives like conferences and workshop. This could be expanded into a broader initiative for forging nexuses between professional bodies across the region. Partnership, networking, capacity-building and professional training all offer opportunities for maximising the human resources of all countries in the region and facilitating professional connectivity.

In order to realise the full potential for people-to-people connectivity between China and South Asia, Media has a unique role in dispelling harmful, alienating myths that widen divides between foreign nations. There are many forms of potentially injurious propaganda that instigate hostile nationalism and fuel scepticism that could be circulated by political factions in the oppositions of

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41 Zhenmin Liu, "Insisting on Win-Win Cooperation and Forging Asian Community of Common Destiny Together" *China International Studies* 45 (2014): 5-25

42 McCully James, "Does One Belt, One Road Mean One Country, One System: An Analysis of Hong Kong's Vanishing Autonomy through One Belt, One Road Influence Educational Scholarship" *Syracuse Journal of International Law and Commerce* 44(2) (2017): 397-430

China's neighbouring countries. Similarly, there may be factions with national populations who must be assured of the common good that is achievable through fostering stronger people-to-people relations. Here, the role of media would be to depict and disseminate the peaceful, win-win cooperation pursued through BRI and the promise of genuine friendship encapsulated in all endeavours towards increased people-to-people connectivity. Moreover, through the culture industries of each state, the media can produce greater affinity among peoples, establish mutual respect for values and mutual appreciation for diverse arts and cultures.

Sustainable development and lasting peace are only possible where the boons of betterment are equitably distributed among all those whose efforts generate this prosperity. As a large proportion of the population constitutes women and women have been historically disadvantaged across the China and South Asia region,[43] a women-centric approach must be adopted in initiatives to enhance people-to-people connectivity. Women's participation and empowerment should be ensured at all stages of the development process as this will benefit all nations. Genuine women empowerment can be achieved only when the principles of gender equality are applied as a coordinated effort across all spheres of governance in region. This fundamental reorientation of regional governance would gradually deconstruct patriarchal social orders and entrench the norm of gender parity in all states in the region.

In order to fulfil the common destiny of nations, global and regional challenges must be addressed with concerted effort and mutual concern.[44] All solutions must be undergirded by the realisation that the fates of all nations are inseparably intertwined. This is a vital component of genuine people-to-people relations as it recognises the fates of the nations to be inextricably intertwined and views all threats as shred burdens and all opportunities as common prospects. The common aspirations of all countries can be meet through the prioritisation of lasting peace, universal security, shared prosperity, equality, inclusivity and a well-protected ecology.[45] Common challenges that can be addressed through greater cooperation include climate change and poor connectivity. A regional research centre on natural disaster may be established,

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43 Piush Antony, *Towards Empowerment: Experiences of Organising Women Workers*, (New Delhi: ILO, 2001).

44 Przychodniak Marcin, "A New Strategy or Just a Change of Tactics: The Main Elements of China's Foreign Policy during Xi Jinping's First Term" *The Polish Quarterly of International Affairs* 26 (2016): 5-17

45 Yi Wang, "China's Diplomacy in New Era: Opening up New Horizons with a New Outlook" *China International Studies* 68 (2018): 5-25

as well as a regional forum on climate change for promoting people-to-people connectivity between China and South Asia in this regard.

4. Challenges for Enhanced People-to-People Connectivity

While there is an abundance of prospects for enhancing people-to-people connectivity between China and South Asia, the path ahead is beset with significant obstacles that must be overcome if strong bonds between these nations are to be forged. Firstly, there is at present a lack of physical connectivity between countries in the region. While BRI continues to rapidly gain momentum, it remains the case that at present there is inadequate physical and infrastructural framework for facilitating the scale and intensity of people-to-people connectivity that is potentially possible. This is a major impediment for advancing stronger bonds between peoples since the BRI is a long-term project and its progress is projected to span many years. Against this backdrop, developing people-to-people relations in tandem will require the creative usage of available supportive connectivity structures and increasing the impetus for accelerating the progress of the BRI. Both requisites are challenging and best with myriad obstacles.

Similarly, there is a lack of people-to-people connectivity architecture. While people-to-people connectivity is integral to the vision of the BRI, unlike its economic counterpart, no coherent, comprehensive and consistent plan has yet been devised for its furtherance in the region. While piecemeal and fragmented initiatives for fortifying cultural exchange are abound, there is need for a systematic approach towards this goal, along with an appropriate monitoring and evaluation framework.

Thirdly, language is a chief barrier to people-to-people connectivity in the region. There is a wide diversity of languages across South Asia and little knowledge and usage of the Chinese language in South Asian countries. The ability to comprehend and communicate meaningfully with one another is the essential minimum for people-to-people relations to prosper. Addressing this challenge is therefore among the first imperatives of enhanced people-to-people connectivity in the region.

Fourthly, there is a lack of resources for pursuing greater people-to-people connectivity. Any mega-project requires a reserve of resources and support from a plethora of stakeholders, from the state to the individual level to enable its actualisation.[46] While this is widely acknowledged in the case of BRI's

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46 McCully James, "Does One Belt, One Road Mean One Country, One System: An Analysis

economic vision,[47] there is a dearth of attention in the context of financing and administratively managing people-to-people connectivity across China and South Asia. The establishment and management of such a vast connective network via an array of platforms requires extensive budgeting, planning and implementation. This is a major challenge for advancing people-to-people connectivity in the region.

Finally, there are complex challenges in orienting development and connectivity to accord a central role to women in the process. The cultural pluralism of this region poses diverse challenges to the empowerment of women. The social values, customs and norms of the region subjugate women and restrict their rights of mobility, autonomy of decision-making and inheritance of property.[48] Deconstructing the sociocultural and patriarchal structures responsible for this condition and countering the intergenerational pervasiveness of gender ideologies pose one of the major challenges of achieving the envisioned paradigm of people-to-people connectivity.

5. Recommendations for Enhancing Connectivity

The furtherance of people-to-people connectivity between China and South Asia requires meeting the challenges along this path effectively and creatively. As to meeting the challenge of inadequate physical connectivity in the region and the lack of architecture of people-to-people connectivity without decelerating the process for equilibration with BRI's pace of infrastructure development, cyber-connectivity offers a means to achieving the desired end in the relative short-term. People-to-people relations can be greatly strengthened through cyber-connectivity. A common cyber gateway of information spanning the entire region would allow the free flow of ideas, information and innovation and greatly diminish the costs of communication to boost trade and commerce and improve connectivity between the peoples. Reducing the costs of communication would make intra-regional connection between people more affordable to the average individual, thereby increasing the interfaces for genuine engagement and affinity to flourish between the nations. With increasing cross-border movement of people throughout the region, effective financial integration will also be needed.

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of Hong Kong's Vanishing Autonomy through One Belt, One Road Influence Educational Scholarship" *Syracuse Journal of International Law and Commerce* 44(2) (2017): 397-430

47 Fangyin Zhou, "Community of Shared Future: An Important Element of the National Security Concept," People ' *Tribune* 6 (2014) 33

48 UNIFEM 2003, Progress of South Asian Women (New Delhi 2003)

In order to address the language barrier that impedes people-to-people connectivity, it is necessary to devise and implement a strategic approach towards enhanced people-to-people relations. As this is an elementary barrier to exchange, it must be addressed as a matter of utmost priority. To this end, there should be distinct mechanisms for promoting language-learning across the region and the schemes should also creatively incentivise the learning and usage of languages. From establishing supportive learning environments, diversifying instructional methods, designing curriculums relevant to the lives of individuals to making language-learning platforms accessible to learners, there are several means of disintegrating the regional language barrier. Accessibility can be enhanced through, for instance, the development of digital applications that create an interactive space for learning and real-time feedback.

Finally, in order to restructure the prevalent regional gender order, it is necessary to establish a form of gender mainstreaming in the scheme of regional connectivity between China and South Asia. In terms of expanding trade and generating employment opportunities, there should be initiatives to support women entrepreneurship and increase the scope for women's participation in the paid labour market. In expanding and developing the platforms for media exchange across the region, it is necessary to raise women to positions of prominence.[49] Such initiatives can gradually provide the impetus for social change across the region.

6. Conclusion

In order to realise the vision of a common destiny, it is necessary to rekindle the historical bond of mutual trust and respect between the peoples of China and South Asia. While there is a robust scheme for physical connectivity that is being progressively effectuated through a cooperative framework for infrastructural development and economic growth, it is essential to enliven the spirit of mutual respect, trust, inclusiveness and learning through increased people-to-people connectivity in the region.

The historical bonds that connect the peoples of China and South Asia offer much inspiration in navigating this new course towards a shared future. The regional history is steeped in the heritage of shared commerce, religion and spirituality, and culture. With the confluence of values, overlapping of outlooks and exchange of ideas, the peoples of China and South Asia have historically shared bonds of mutual regard and amity.

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49 Karlekar, Malavika. "A Note on Empowerment of Women" *Indian Journal of Gender Studies* 11(2) (2004): 145-155.

In the contemporary international and regional geopolitics of China, the people-to-people nexus is integral to the vision of a common destiny for China and its South Asian neighbours. BRI has established new frontiers for reinvigorating the people-to-people nexus and offers a number of avenues whereby enhanced connectivity can be pursued. Economic integration of the region offers tremendous prospects for people-to-people connectivity by creating a market of 2.8 billion people and offering employment prospects on a mass scale. A potentially highly productive amalgam can be achieved by combining China's growing economy and South Asia's untapped reserves of resources.

Greater connectivity can also be fostered through enhanced cultural exchange. Not only can initiatives like the establishment of museums and expos facilitate this, but the creative use of the entire spectrum of platforms and the harnessing of technological advances to this end will achieve effective and meaningful cultural cross-pollination in the region.

Tourism is yet another sector where regional people-to-people connectivity can be expanded, through both government and non-governmental fora. Efforts should be invested in developing training and exchange programs to promote and ameliorate the scopes for tourism in the region.

The potential of the youth must be harnessed for the fulfilment of the region's common destiny, as the future belongs to the youth. Thus, the regional governance framework should reflect the priorities and concerns of the youths of China and South Asian state. There are several initiatives that can be taken to improve connectivity through the youth, including the establishment of a regional centre for the promotion of youth leadership that empowers the youth as agents of change.

Education is another promising avenue for enhanced people-to-people connectivity. More scope for people-to-people interaction, learning and exchange can be created through the establishment of more scholarships, exchange programs and collaborative research initiatives. Intellectual exchange can also be pursued through think-tanks and other institutions of research, scholarship and strategic expertise though collaborative research outputs, conferences and workshops. Even greater connectivity can be achieved through professional partnerships, networking and joint ventures for maximal professional connectivity that translates into general people-to-people connectivity.

There is a specialised role for media in fortifying people-to-people relations in China and South Asia, dispelling harmful myths, countering falsities and projecting the true image of regional dependence and shared prosperity.

Culture industries have a crucially facilitative role to play in this regard.

Greater gender parity is essential for sustainable socioeconomic progress and this can be key component for enhanced people-to-people connectivity in the region. Aligned with this revisionist approach towards correcting common wrongs in the region, common threats must also be address through coordinated effort and using shared resources. Hence, in order to meet impending threats like climate change, states in the region should join hands to establish, for instance, regional forums for climate change and disaster management research.

In order to capitalise on the burgeoning potential for enhanced people-to-people connectivity between China and South Asia, it is necessary to creatively confront the challenges along the path to the region's shared future. The principal challenges are the inadequacy of physical connectivity to support people-to-people exchanges, the lack of architecture for people-to-people connectivity, the wide language divide that must be bridged for meaningful people-to-people communication, the dearth of resources for driving the necessary changes and finally, the intrinsic challenges of overturning the prevalent patriarchal gender order.

However, none of these challenges are insuperable and may be resolved through the establishment of a cyber gateway as a form of 'thought corridor', in tandem with the physical infrastructure of the BRI, so that people-to-people connectivity can flourish notwithstanding the inadequacies of the status quo. Similarly, language barriers can be overcome through dedicated schemes to achieve this end as a matter of high priority. Finally, the impetus for social change to empower women must be incrementally developed through initiatives that accord women priority in socioeconomic spheres.

The common destiny of China and South Asia builds on the rich shared history of the region and progresses towards common prosperity. Harnessing the potential for advancement requires all nations to develop relationships of mutual trust and amity. Set against the backdrop of the regional heritage of connectivity, this analysis has sketched out the major venues for pursuing enhanced people-to-people connectivity, identified the principal challenges that impede progress along these paths and provided recommendations for overcoming these obstacles to establish a region of peace, development and win-win cooperation. The ascent of China and South Asia on the global horizon heralds a new era in regional peace and prosperity and the strategic imperatives of all these nations converge to demand the prioritisation of people-to-people connectivity for a transhistorical fulfilment of the vision of common destiny.

Food Security in India
Threat Mapping: Impact of Climate Change
Sourina Bej[1]

ABSTRACT

As India is a large country with an area of more than 3 million square kilometers, it has a diverse climate. Two-thirds of the area of India is dependent on rain so the food security has become an emerging issue in light of the World Food Summit. As India is a hugely populated country, the several threats imposed by climate change on the food security of the nation can have far-reaching consequences. The factors which influence food security are raising concerns for the nation and the world. The food insecurity in India is largely caused by anthropological factors, increasing population, misuse of agricultural lands and misuse of water resources. The paper establishes the link between food security and climate change in the context of India. The food security aspects were brought up in the World Food Summit to raise awareness for the whole world before it is too late. There are projections based on the regions and the issues across India. The article revolves around India's historical trends in temperature, rainfall, extreme events, issues of land degradation and desertification and food security vulnerability to climate change in agro-ecological zones. The adaptive capacity and the capacity-building measures play a significant role in order to reduce the risks imposed by climate change on India's food security. The article focuses on the various implications of climate change on food security, water security and displacement in India. The adverse impacts of climate change on India's food security should be dealt with proper measures as India is one of the most food-deficient countries in the world.

Keywords: Food Security, India, Environment, Climate change

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According to the definition of the World Food Summit, food security is achieved when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food security is based on multitude of factors such as production of food, unavailability of food, poor purchasing capacity, socio demographic concept which includes illiteracy, gender gap, unemployment, overcrowding etc. The issue of lack of food security is one of the biggest confronting the world today and staring straight at countries like India.

Several factors plague food security in India. Declining yields, rising land degradation, loss of soil fertility and water logging are on rise. Ground water level in several areas has been declining. Differences in productivity across the regions and among the crops, between irrigated and non-irrigated farmland gives rise to regional disparity with regards to food security. The shrinking of farm size due to sub division and land alienation is aggravating the agrarian crisis. The diversion of agricultural land to set up special economic zones, the change in land use due to urbanization and the alienation of tribal land for mining and other industrial activities are other important issues that pose severe challenges to the farming community. Lack of interest in agriculture, high cost of crop production, destruction of standing crop due to various reasons and farmer suicides are some other factors. Along with these issues, is the subject of climate change.

This report is an attempt to give a nation-wide projection on possible scenarios of food insecurity in India based on qualitative understanding of food production. In this aspect, the report looks at the impact of climate change in the current food production and storage in the country by answering the basic question: How much role does Climate change play in causing food security? It also looks at whether climate change aggravates an existing peril which is human induced?

The report has divided India into 20 agro-ecological zones[2]. Five contributing factors/parameters/issues to food insecurity have been identified: Rainfall, temperature, extreme events, land degradation, and capacity building/ civil society initiatives. The issues were then studied in each ecological zone to understand the broad link between the causes of water scarcity and climatic

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[2] *The agro-ecological zones are by the National Bureau of Soil Survey & Land Use Planning. It is based on the growing period that takes into account effective rainfall, soil groups and delineated boundaries adjusted to district boundaries with a minimal number of regions.*

variability. Following this, a table is compiled to measure each parameter as a step to understand the vulnerability. It is based on this the following projections are being made in two subdivisions: Regions and issues.

Region-wise projection

Western Plain, Kutch Peninsula: The area comprises south western Haryana, Punjab, western Rajasthan, Kachchh peninsula (Gujarat). It is already water deficit with precipitation less than 400 mm. Over the years, there has been an increase in temperature along with decrease in annual rainfall. Summer rainfall has increased in parts of western plain (Rajasthan) but decreased in Gujarat. Monsoon rainfall on the other hand has decreased in Rajasthan and increased in Gujarat between 1951 and 2010. Post monsoon rainfall has decreased throughout. The areas have also been receiving more intense rainfall (that may or may not be attributed to climate change) that have led to floods in Thar, Barmer and western Rajasthan. Parts of Eastern Rajasthan such as Jaggar, Karauli are experiencing declining in water table. Gujarat and Haryana are experiencing increase in desertification. This has made rain-fed agriculture more vulnerable. **A 2°C rise of temperature in Rajasthan is estimated to reduce production of pearl millet by 10-15 per cent.**

Deccan Plateau: The zone comprises of Bellary district, south-western parts of Bijapur district and Raichur district of Karnataka and Anantapur district of Andhra Pradesh.The region has hot and dry summer and drought condition. The rainfall varies from 50 to 60 cm. The rainfall in the area is showing a declining trend that would affect the cropping pattern, food production, water availability and health and nutrition in the area. **Lack of rainfall affects the cultivation of sunflower, Bengal gram, wheat, paddy and cotton. A 2°C rise in temperature, dry spells and unseasonal rains are predicted for Bellary district for 2021-2050 escalating future farming risks.**

Northern Plain and Central Highlands: The zone comprises Gujarat, Punjab, UP, MP, Haryana, Punjab. Studies have predicted that the average mean surface temperature in the region can rise between 3.5°C and 5°C by the end of the century. With rising temperatures, semi-arid regions of western India are expected to receive more intense rainfall, while central regions are likely to experience a 10 to 20 per cent decrease in winter rainfall by 2050. **The semi-arid ecological regions are already affected by water shortage which have a negative impact on agriculture.** Along with that there has been rise in temperature in Uttar Pradesh, Punjab and Haryana. **A 1°C rise in temperature**

can negatively affect wheat yield. The zone is also vulnerable to extreme events such as cyclone, floods, drought etc. **There have been predictions that maize yield during the winter and monsoon season can decrease in the mid Indo-Gangetic Plains as a consequence of increased temperature.**

Eastern Plain: Changes in maximum temperature may also cause reduction in the yield of rice to the tune of 1 to 1.1 per cent hectare by 2020. Similarly, minimum temperature □change may decrease the yield of rice by 1.5 to 1.9% per hectare in Eastern Uttar Pradesh. Wheat yield may decrease by 5 to 6 per cent in Bihar state due to changes in maximum temperature alone by the end of the year 2080 whereas this decrement in Eastern Uttar Pradesh is expected to be between 1.5-2 per cent. Rice farming in eastern India is becoming risk prone due to complex ecological situations marked by frequent flood and drought.

Central Malwa: Comprises western areas of Madhya Pradesh and south-eastern parts of Gujarat and Rajasthan. Drought like conditions persist in Rajasthan, Jhabua and Dhar in Madhya Pradesh and Panchmahal, Bhavnagar and Amreli in Gujarat. This region already suffers from alkaline soil. **Along with that, rising temperature and increasing carbon di oxide are having an impact on wheat and maize in these regions.** Alkaline soil and sea water inundation are also the factors affecting food security in Kathiawar peninsula affecting food production.

Deccan Plateau (Semi-Arid): Most of the central and western parts of Maharashtra, northern parts of Karnataka and western parts of Andhra Pradesh fall in the zone. Several parts in the region are drought-prone and follow rain-fed agriculture. Summer monsoon is decreasing in Karnataka and Maharashtra and temperature during monsoon is on rise. Widespread drought is followed by freak rain storms. In 2016, 29,000 of 43,665 villages were declared drought affected.

Western Himalyas: Over the years, temperature in Himachal Pradesh has gone up. Change in climate, especially increasing temperature, was perceived to be responsible for decline in fruit size and so that the quality. Infestation of pest and diseases such as apple scab, scale root and canker were some of the indicators of climate change. At lower hills, production of apples has been affected as the fruit requires 1200–1500 hours of chilling depending on type of cultivars. The chilling hours <1000 lead to poor fruit formation.

North Eastern Region: Analysis indicates that the climate change may impact the irrigated rice yields by about –10% to 5%, with majority of the NE region benefiting up to 5% in 2030. On the other hand, the impacts on rain fed rice

are likely to be in the range –35% to 5%, with a large area losing by about 10%. Irrigated maize yields are projected to reduce by about 40%. In case of rabi season crops, wheat yields are projected to reduce by up to 20%. Potato yields are likely to marginally increase up to 5% in the upper parts of the NE region due to climate change, but in the central parts projected yield loss is about 4%, and in southern parts of the region the negative impacts will be much higher. Irrigated mustard crop is also projected to lose yields up to 10% in majority of the areas.

Issue-wise projection

Temperature: An increase in temperature has been a uniform phenomenon around the world.It is estimated that there is a 100-year linear trend of 0.74°C increase. Since 1961, average temperature of the global ocean has been taking up over 80% of the heat being added to the climate system. In India, an increase in the linear trend of about 0.4°C in the surface air temperature has been observed in the past century. The five warmest years since 1901 came in the last fifteen years with 2016 as the warmest year, according to India Meteorological Department (IMD). Areas of Deccan plateau comprising Andhra Pradesh, Karnataka, Maharashtra, central Malwa highlands comprising parts of Gujarat and MP have witnessed rise in number of hot days and increase in heat waves. Eastern Ghats in Kerala and Tamil Nadu, Eastern Himalayan region of Arunachal Pradesh, Sikkim and Western coastal plains have also recorded high increase in temperature. Increase in temperature has also had a bearing on the rainfall pattern. These two combine to effect water resources and in turn food production in the areas.

Rainfall: There has been a uniform shift in the rainfall pattern with late monsoon onset, erratic rain and extreme downpour (resulting in floods) being the norm. According to the IMD data, there has been a coherent decrease in rainfall in most of the states during the monsoon season. The southwest monsoon - from June to July - was found to have been decreasing, while the post-monsoon rains of October and November have increased. This change in rainfall has affected the sowing patterns.The Deccan plateau has experienced a departure of normal monsoon rainfall trend, as per the IMD and few regions in the region have received deficient rainfall with negative departure of -42%. States like Uttar Pradesh, Punjab, Himachal Pradesh, Uttaranchal, Madhya Pradesh, Chhattisgarh, Maharashtra, Karnataka, Kerala, Sikkim, Assam, Arunachal Pradesh, Nagaland and Andaman and Nicobar Islands fell in this breaket. Rainfall has increased significantly in West Bengal (+3.63 mm/

year) and increasing in Jammu and Kashmir, Tamil Nadu, Andhra Pradesh, Jharkhand, Gujarat, Rajasthan, Tripura, Meghalaya, Manipur, and Odisha.The number of rainy days has increased but so has the intensity of rain.

Extreme Events: Extreme events include heat waves, cold snaps, tropical cyclones, storm surges, floods, droughts and bushfires. While it is not established that the extreme events are all caused by climate change, the latter is believed to contribute to many extreme events. There has been significant rise in frequency and magnitude of extreme events and decrease in frequency of moderate events. For example, dry spells in each decade have increased on one hand and deluges have become more severe on the other. Such conditions increase the risk of floods and droughts, thus impacting crop yields, as has been noted in many places such as Maharashtra and Andhra Pradesh. It can lead to crop failures particularly at certain growth states when crops are particularly vulnerable. Between 2007 and 2015, crops in Andhra Pradesh, Bihar, Karnataka, Maharashtra, Odisha, UP, and West Bengal suffered the most due to extreme events such as cyclonic storms, floods, rains and landslides.

Land Degradation: There is growing recognition of the part played by climate change such as prolonged or frequent droughts aggravating land degradation. Warming of air temperatures and decreases in precipitation can cause drought conditions and prevent the sustained growth of vegetation. The land becomes extremely dry (or desiccated) meaning that its surface layers often become fragmented (unconsolidated or friable) and susceptible to erosion. When the rain falls, and flash flood events occur, much of this material prepared under drought conditions is very quickly swept away, further degrading the land surface. According to the satellite images analysed over a period of eight years, 30 per cent of the Total Geographical Area (TGA) in India was going through desertification. The most significant process of desertification/ land degradation in the country is water erosion followed by vegetation degradation, and wind erosion. Rajasthan, Maharashtra, Jammu and Kashmir, Karnataka, Jharkhand, Odisha and Gujarat have shown highest degradation.

Pests and Diseases more than 500 million tonnes of food grains are lost annually due to plant diseases. Studies have also predicted that increase in temperature and rainfall in tropical regions, will lead to pests throughout the year. Climate change is one of the reasons likely to cause a spread of tropical and subtropical weed species into temperate areas and to increase the numbers of many temperate weed species currently limited by the low temperature at high latitudes. The limited research on the subject have predicted that Karnataka, Tamil Nadu and Maharashtra will be the worst affected areas. Increase of Carbon di-oxide will also increase the damage caused by insects.

National government schemes and Civil Society Initiatives: It has been viewed that most schemes of the government and initiatives taken by civil society have been half hearted and have led to very limited positive results. In Western Himalyas, few practices such as employing bio technology, agronomic practices that increase carbon sequestration have led to increased root biomass, soil organic matter, water and nutrient retention capacity. In Karnataka, the state government along with the assistance of ICRISAT, NGOs and the local community has undertaken watershed interventions in four villages covering 7,000 hectares. Interventions include, creating automatic weather stations, rainfall measurement at watersheds quantities, moisture availability in different phases of crop growth.

These have shown positive outcomes, albeit in a limited area. In Andhra Pradesh, the farmers across 9000 villages are practicing Community Managed Sustainable Agriculture (CMSA) which promotes the use of locally available, organic external inputs—including cow dung, chickpea flour, and palm sap— and the use of traditional organic farming methods such as poly-cropping and systems of rice intensification (SRI). Farmers in selected areas of Tamil Nadu, Indo-Gangetic plains are shifting to climate smart agriculture with climate resilient crops, diversification of crop mix, usage of technology to reduce water use, enhance soil and cut down on fertilizer use. Sikkim has been a success story with regard to food security. With the help of Indo-German climate change adaptation project, Sikkim is the first Himalayan state to go completely organic by 2015. New technologies for farming, introduction of high yielding and hybrid seeds from outside, distribution of hybrid seeds, Effective Microorganism (EM) technology etc are benefiting a limited number of farmers. Efforts are on to increase the reach of these programmes. With these efforts, vulnerability to climate change is low.

Threat Map: Assessing impact of Climate Change on Food Security

Zones/ States Covered	Rainfall declining threats[1]	Temp[2]	Extreme Events[3]	Land Degra-dation (%)[4]	Capacity Building (miscell)	Food Security Vulnera-bility
Western Himalyas Jammu and Kashmir Himachal Pradesh	JK: Low HP: High **Result Moderate**	JK: Low HP: High **Result: Low**	JK: Low HP: Low **Result: Low**	JK: High; Increasing HP: Moderate; Increasing **Result: High; Increasing**	**Effective**	**Low**
Western Plain; Kutch Peninsula Gujarat Rajasthan Haryana Punjab	G: Low R: Low H: Low P: Moderate **Result: Moderate**	G: Moderate R: Moderate H: No Trend (NT) P: Low **Result: Moderate**	G: Moderate R: Moderate H: Low P: Low **Result: Bordering Moderate**	R: High, De-creasing G: High, Increasing H: Low, mild Increase P: Low, mild increase **Result: High**	**Ineffective**	**High**
Deccan Plateau (Arid) Andhra Pradesh Karnataka	AP: L K: M **Result: Low (Moder-ate)**	AP: Mod-erate K: Moderate **Result: High**	AP: High K: High **Result: High**	AP: Moderate, mild increase K: High, no change **Result: High**	**Isolated**	**High**

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[1] *High (threat) due to decline of 0.3mm and beyond. Moderate threat between zero to -0.3mm and low threat due to positive increase in rainfall. Data from Annual temperature trends (IMD) map for 1951-2011.*

[2] *"High" increase in temperature above 0.01 degree Celsius, "moderate" increase between 0 to 0.01 degree Celsius and any decrease in temperature signifies "low".Data from Annual temperature trends (IMD) map for 1951-2011.*

[3] *High threat to state-wise crops affected between 2007 and 2015 due to cyclonic storms, floods, rains and landslide above 20 (lakh hectare), moderate threat between 10 to 20 lakh hectare and low threat between 0 to 10 lakh hectare. Government of India Report*

[4] *High desertification as 1.5% and above, moderate desertification between 0.5%-1.5% and low desertification between 0% to 0.5%. Data has been taken from ISRO Atlas comparing 2003 and 2013.*

Northern Plain, Central Highlands Gujarat Rajasthan UP MP Haryana Punjab	G: Low R: Low UP: High MP: High H: Low P: High **Result: High**	G: Moderate R: Moderate UP: NT MP: Moderate H: NT P: Low **Result: Moderate**	G: High R: High UP: High MP: Moderate H: Low P: Low **Result: High**	G:High, increasing R: High, decrease H: Low, mild Increase UP: Low, decrease MP: Moderate, mild increase P: Low Punjab: low, mild increase **Result: Moderate**	**Isolated**	**High**
Central Malwa highlands and Kathiawar Peninsula Gujarat MP	G: L MP: High **Result: High**	G: Moderate MP: Moderate **Result: High**	G: High MP: Moderate **Result: High**	Gujarat: High, increasing MP: Moderate, mild increase **Result: High**	**Ineffective**	**High**
Deccan Plateau (Semi-Arid) Karnataka Andhra Pradesh Maharashtra MP	K: Moderate AP: Low M: Moderate MP: Moderate **Result: Moderate**	K: Moderate AP: Moderate M: Moderate MP: Moderate **Result: High**	K: High AP: High M: High MP: Moderate **Result: High**	AP: Moderate, mild increase K: High, no change M: High, increasing MP: Moderate, mild increase **Result: High**	**Ineffective**	**High**
Deccan Plateau and Eastern Ghats Telangana	AP: Low **Result: Low**	AP: Moderate **Result: Moderate**	AP: High **Result: High**	AP: Moderate, mild increase **Result: Moderate**	**Effective**	**Low**
Eastern Ghats (TN uplands) and Deccan plateau Karnataka TN Kerala	K: Moderate TN: Low Ke: Moderate **Result: Moderate**	K: Moderate TN: High Ke: Moderate **Result High**	K: High TN: High Ke: Low **Result: High**	K: High, no change TN: low, mild increase **Result: Moderate**	**Effective**	**Low**

Northern Plain Bihar UP Punjab	B: Low UP: High P: Moderate **Result: High**	B: NT UP: NT P: L **Result: Low**	B: High UP: High P: Low **Result: High**	B: Low, mild Increase UP: low, decreasing **Result: Low**	**Effective measures at isolated places**	**Moderate**
Central Highlands MP Maharashtra	MP: Moderate M: Moderate **Result: Moderate**	MP: Moderate M: Moderate **Result: Moderate**	MP: Moderate M: High **Result: High**	MP: Moderate, mild increase M: High, Increase **Result: High**	--	No trend. Lack of information on adaptive capacity
Eastern Plateau Chhattisgarh	**Result: Moderate**	**Result: No trend**	**Result: Moderate**	**Result: Moderate**	**Isolated**	**Moderate**
Eastern Chota Nagpur Plateau and Eastern Ghats Odisha W. Bengal Bihar MP Maharashtra	O: Low WB: Low B: Low MP: Moderate M: Moderate **Result: Low**	O: NT WB: NT B: NT MP: Moderate M: Moderate **Result: Moderate**	O: High W: High B: High MP: Moderate M: High **Result: High**	O: High, mild increase WB: Moderate, mild increase B: low, mild increase MP: moderate, mild increase M: high, increasing **Result: Moderate, Increasing**	--	No trend. Lack of information on adaptive capacity
Eastern Plain UP Bihar	UP: High B: Low **Result: High**	UP: NT B: NT **Result: No trend**	UP: High B: High **Result: High**	UP: low, decreasing B: low, mild increase **Result: Low, Decreasing**	--	Absence of capacity building **Moderate**
Western Himalyas J&K HP Uttarakhand	J&K: Low HP: High U: Moderate **Result: Moderate**	J&K: Low HP: High U: No Trend **Result: Moderate**	JK: Low HP: Low U: Low **Result: Moderate**	JK: High, increasing; HP: moderate, increasing U: Low, increasing **Result: Moderate, Increasing**	--	**Moderate**

Assam and Bengal plains W.Bengal Assam	W.B: Low Assam: High **Result: Low**	WB: NT A: Moderate **Result: Moderate**	WB: High A: High **Result: High**	Assam: Low, Increasing WB: Moderate, Increasing **Result: Low, Increasing**	**Climate smart agriculture an option**	**Low**
Eastern Himalyas Arunachal Sikkim W. Bengal	Ar: High S: High WB: Low **Result: High**	Ar: Moderate S: High WB: NT **Result: High**	AP: Low S: Low WB: High **Result: High**	AP: Low, mild increase S: Low, no change WB: Moderate, Increasing **Result: Low, Mild Increase**	Effective	**Low/Medium**
North Eastern Hills Tripura Mizoram Meghalaya	T: Low Mi: Low Me: Low **Result: Low**	T: NT Mi: High Me: NT **Result: Moderate**	T: Low M: Low Me: Low **Result: Low**	T: High, Increasing Mi: Moderate, Increasing Me: High, Mild Increase **Result: High**	--	**Low**
Eastern Coastal Plains TN Puducher-ry AP Odisha W. Bengal	TN: Low P: Low AP: Low O: Low W.B: Low **Result: Low**	TN: High P: Moderate AP: Moderate O: NT WB: NT **Result: Moderate**	TN: High P: Low AP: High O: high WB: High **Result: High**	TN: low, mild increase AP: low, mild increase O: high, mild increase WB: moderate, increasing **Result: Moderate, increasing**	--	Lack of information adaptive capacity. **Moderate** in the absence of civil society initiatives
Western Coastal Plains Kerala Goa Daman & Diu Maharashtra Gujarat	K: Moderate G: High D: Moderate M: Moderate G: Low **Result: Moderate**	K: Moderate G: High D: Moderate M: Moderate G: Moderate **Result: High**	K: Low G: Low D: -- M: High Gu: High **Result: Moderate**	K: low, mild increase Goa: low, no change M: High, Increasing Gu: High, increasing **Result: High, increasing**	--	No trend Lack of information on adaptive capacity **Moderate** in the absence of civil society initiatives
Islands of Andaman Nicobar and Lakshadweep	**High**	**Moderate**	--	--	**Effective**	**Low**

Background

The World Food Summit has defined food security as all people, at all times, having physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food security is based on multitude of factors such as production of food, unavailability of food, poor purchasing capacity, socio demographic concept which includes illiteracy, gender gap, unemployment, overcrowding etc. Food security is one of the biggest issues confronting India today. The productivity of various crops and legumes are already lower than those in the US, China and Europe.

Countries	Yield (Kg/hectare) (2014)
Bangladesh	4618
US	7638
China	5886
India	**2984**
UK	7697
Germany	8050
Sri Lanka	3802

Source: World Bank Database (2014)

In the last two decades there has been a tapering off or decline in both production and yields in Indian agriculture. During the period 1996-2008 as compared to the years 1986-97, the growth rate in food grain production declined very sharply from nearly 3 percent to around 0.93 percent. The growth in production was much less than the growth in population in the latter period, having a serious impact on per capita availability. The growth rate of yields in food grain also declined from 3.21 percent to 1.04 percent. There was thus a decline in rates of production and yields for cereals, pulses, oilseeds, rice and wheat (Chandy 2013).

There are several issues plaguing Indian agriculture. Farmer suicides, declining yields, rising land degradation, loss of soil fertility and water logging are on rise. Ground water levels in several areas has been declining. Differences in productivity across the regions and among the crops, between irrigated and non-irrigated farmland gives rise to regional disparity with regards to food security. The shrinking of farm size due to sub division and land alienation is aggravating the agrarian crisis. The diversion of agricultural land to set up special economic zones, the change in land use due to urbanization and the alienation of tribal land for mining and other industrial activities are other important issues that pose severe challenges to the farming community. Among these issues arise the role of climate change in the current issue of food security in the country.

Table 1: Growth Rate and Yields of Food Grain, Oil Seeds and Pulses

Table 1B: Growth Rate and Yields of Food grain, Oilseeds and Pulses
(percent per annum)

Crop Group/crops	Production		Yields	
	1986-87 to 1996-97	1996-97 to 2007-08	1986-87 to 1996-97	1996-97 to 2007-08
Food grains	2.93	0.93	3.21	1.04
Cereals	3.06	0.97	3.36	1.19
Coarse cereals	1.19	1.53	3.66	2.25
Pulses	1.32	0.36	1.49	-0.02
Oilseeds	6.72	1.99	3.32	1.49
Rice	3.06	1.02	2.37	1.22
Wheat	4.09	0.65	2.93	0.34

Source: As in S.Mahendra Dev, and A. Sharma, 2011. There being filled trend rates based on CACP, 2009.

According to the Inter-Governmental Panel on Climate Change (IPCC), climate change is a change in the state of the climate that can be identified (e.g., using statistical tests) by changes in the mean and/or variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity." UNFCC emphasizes on a change that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

Research Methodology

This report is part of the project titled **Threat Mapping: Water Security, Food Security and Human Displacement: Impact of Climate Change in India.**

It is a qualitative study and following indicators have been used to measure the impact of climate change on food security in India: Role of Temperature, Rainfall, Extreme Events, Desertification. These indicators are then super-imposed to the 20 agro climatic zones of India listed by the National Bureau of Soil Survey & Land Use Planning (NBSS&LUP). Another indicator is the Civil Society Initiatives to counter the effects of these four indicators. The capacity building initiatives and adequate responses prepared by stakeholders will be analysed zone-wise to finally map the to map the climate change threats to food security in the country.

These indicators have been divided into four threat parameters: Low, Moderate, High and No Trends.

For the purpose of the study, data has been used from Indian Meteorological department (IMD), Indian Space Research Organisation (ISRO), Government of India reports, research papers and data from organisations such as World Bank, TERI, IFCC, etc have also been used. The study will also seek responses from experts to measure the vulnerability index of the food security to climate change.

I. Temperature

The temperature increase is wide spread across the globe and is greater at higher northern latitudes. It is estimated that there is a 100-year linear trend of 0.74°C increase. It is observed since 1961 that the average temperature of the global ocean has been taking up over 80% of the heat being added to the climate system. Warming of the climate system induces increase in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level. In India, an increase in the linear trend of about 0.4°C in the surface air temperature has been observed in the past century. In India the five warmest years since 1901 came in the last fifteen years with 2016 as the warmest year, according to India Meteorological Department (IMD).

**Table 2: IMD Data for Five Warmest Years Since 1901**

Year	Degree Celsius above 1961-90 average
2016	0.91
2009	0.84
2010	0.81
2015	0.72
2002	0.67

Studies have stated that crops are sensitive to changes in temperature and global warming has the potential to influence crops. In India, in the last fifty years, annual mean temperatures have increased significantly over most of the states. Temperature at most of the states in India has recorded an increase by almost 95 per cent. A warming trend is visible along the west coast, central India, interior peninsula and the North-Eastern India, but some cooling trends are also visible in the North-West India and parts of South- India (NAPCC 2008).

State wise averaged annual mean maximum temperature time series has shown increasing trends over many states of India except Bihar, Chhattisgarh, Delhi, Haryana, Jammu and Kashmir, Meghalaya, Punjab, Tripura and Uttar Pradesh.Increasing trends have been seen over Andaman and Nicobar,

Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Orissa, Rajasthan, Sikkim, Tamil Nadu and Uttarakhand. The highest increase in annual mean maximum temperatures was observed over HimachalPradesh (+0.06 C/year) followed by Goa (+0.04 C/year), Manipur, Sikkim, Mizoram and Tamil Nadu (+0.03 C/year each). The decreasing trends were significant over Punjab (-0.01 C/year) and Haryana (-0.02 C/year).

Picture 1: Annual Mean Temperature Trends for 1951-2010
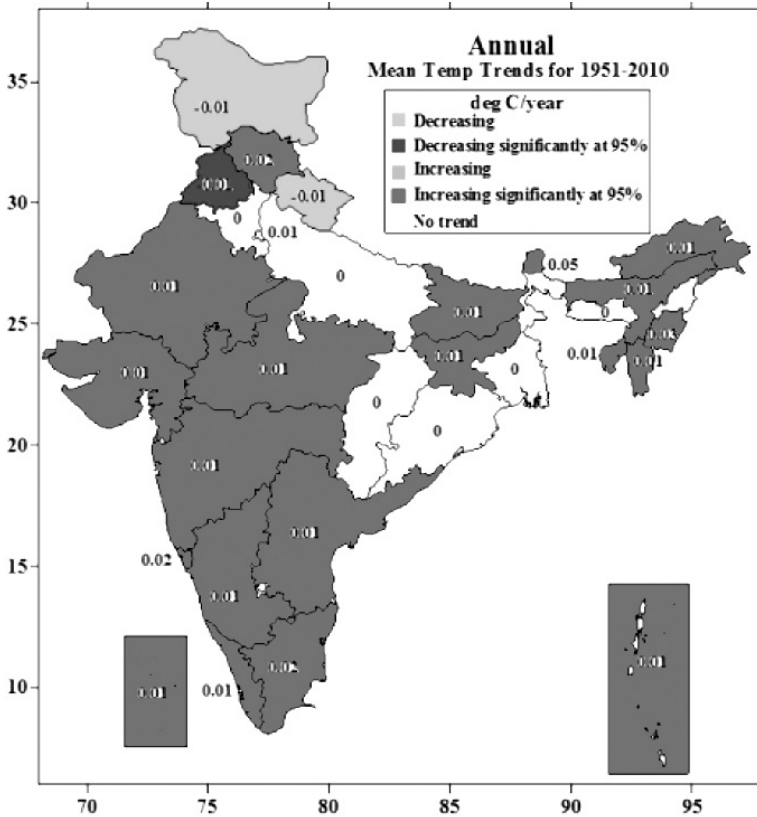
Source: Rathore, L.S. et. al. (2013)/ IMD (2013)

For the purpose of this report the following parameters have been considered:
Low: 0 to -0.01 degree Celsius
Moderate: 0 to 0.01 degree Celsius
High: Above 0.01 degree Celsius

State averaged summer mean maximum temperatures have increased over all states of India except Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Meghalaya, Punjab, Tripura, Uttar Pradesh, Uttarakhand and West Bengal. The increasing trends were significant over Andaman and Nicobar, Andhra Pradesh, Goa, Himachal Pradesh, Karnataka, Kerala, Lakshadweep, Maharashtra, Mizoram, Rajasthan, Sikkim and Tamil Nadu. The highest increase has been obtained over Himachal Pradesh followed by Goa, Sikkim and Tamil Nadu.Bihar, Tripura and West Bengal have observed significant decreasing trends. However, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Jharkhand, Meghalaya, Punjab and Uttarakhand showed no trend during last 60 years.

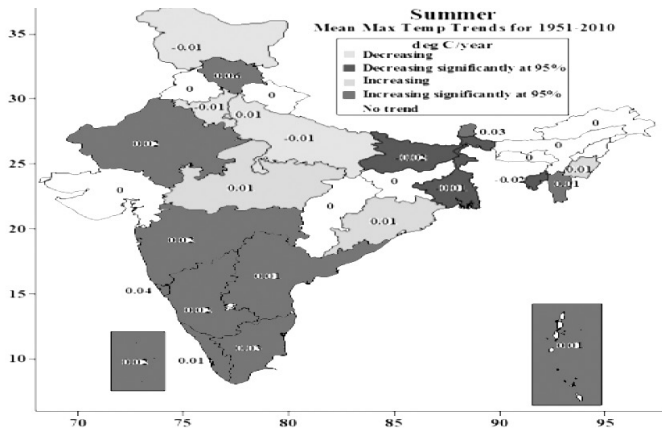**Map 2: Summer Mean Max Temperature Trends for 1951-2010**

Figure 13: State level mean maximum temperature trends for summer season.

Map 3: Winter Mean Max Temperature Trends for 1951-2010
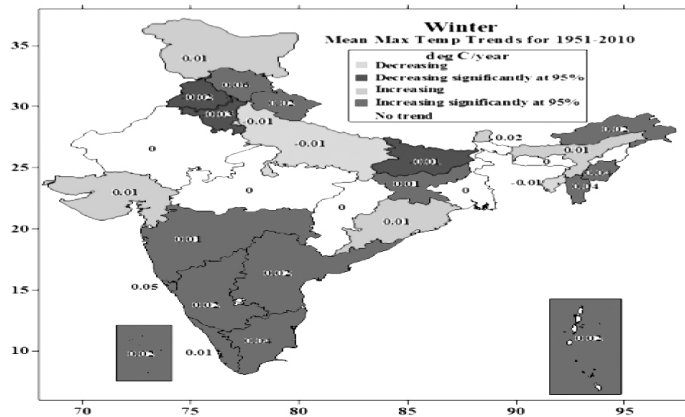

Figure 8: State level mean maximum temperature trends for winter season.

Source: Rathore, L.S. et. al. (2013)/ IMD (2013)

The winter season witnessed Himachal Pradesh recording the highest increase followed by Goa, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Uttaranchal, Andaman &Nicobar Islands and Lakshadweep, Mizoram and Manipur, Arunachal Pradesh, Kerala and Bihar. Gujarat, Jammu and Kashmir, Assam, Odisha and Sikkim have also recorded increasing temperatures in the last 60 years. Punjab, Haryana, Jharkhand, West Bengal, Tripura and Uttar Pradesh recorded declining temperatures during winter season

II. Rainfall

According to the IMD data, there has been an increase in inter annual and intra-seasonal variability of monsoon rainfall. The data shows that annual rainfall trends are mixed with significant increase in West Bengal and Assam but decreasing significantly in Uttar Pradesh. The IMD data also reveals that the rainfall patterns have also shifted. There has been a coherent decrease in rainfall in most of the states during the monsoon season. The southwest monsoon - from June to July - was found to have been decreasing, while the post-monsoon rains of October and November have increased. Change in rainfall has affected sowing patterns.

Map 4: Annual Rainfall Trends for 1951-2010
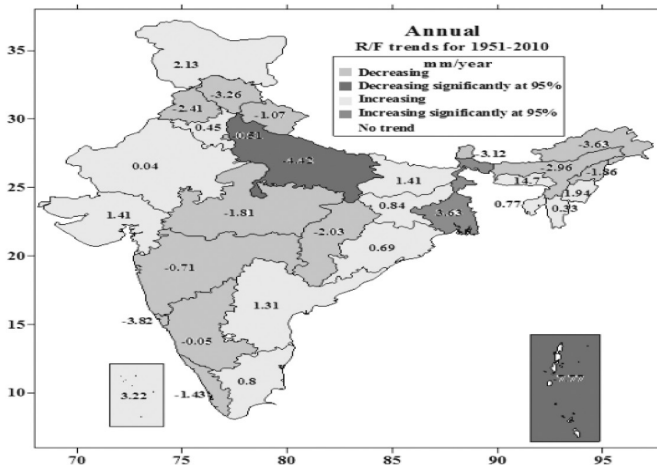
Source: Rathore, L.S. et. al. (2013)/ IMD (2013)

For the purpose of this report the following parameters have been created:
High (Threat due to steep decline): - 3.0 mm/year and beyond
Moderate (Threat due to decline): Zero to -3.00 mm/year and beyond
Low (Low threat due to increase in rainfall): Positive increase
No Trend: Zero difference

According to the data rainfall is decreasing the most in states like Uttar Pradesh, Punjab, Himachal Pradesh, Uttaranchal, Madhya Pradesh, Chhattisgarh, Maharashtra, Karnataka, Kerala, Sikkim, Assam, Arunachal Pradesh, Nagaland and Andaman and Nicobar Islands. Rainfall has increased significantly in West Bengal (+3.63 mm/year) and increasing in Jammu and Kashmir, Tamil Nadu, Andhra Pradesh, Jharkhand, Gujarat, Rajasthan, Tripura, Meghalaya, Manipur, and Odisha. However, monsoon rainfall trends have been declining in most states except Jharkhand, Odisha, West Bengal, Gujarat, Karnataka, Meghalaya and Mizoram.

Map 5: Monsoon Rainfall Trends for 1951-2010
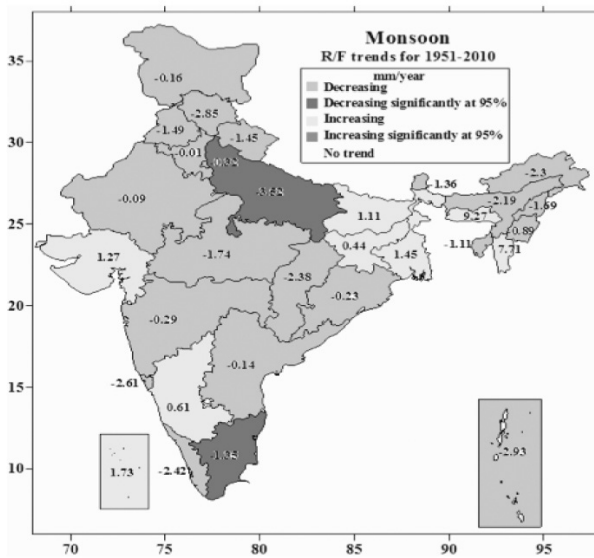
Figure 22: State level rainfall trends for monsoon season.

Source: Rathore, L.S. et. al. (2013)/ IMD (2013)

III. Extreme Events

Extreme events include heat waves, cold snaps, tropical cyclones, storm surges, floods, droughts and bushfires. Extreme climate events can have a serious impact causing loss of life, property and livelihoods. In recent years, the occurrence of extreme climate events and the associated damage has become highly visible. While it is not established that the extreme events are all caused by climate change, it is believed that climate change contribute to many extreme events. Studies suggest that there has been significant rise in

frequency and magnitude of extreme events and decrease in frequency of moderate events.

Researchers at Stanford University, California (Singh et. al. 2014) have concluded that even as the average total rainfall during the peak monsoon season of July and August has declined since 1951, the variability of rain during these months has increased – deluges are more severe, and dry spells more frequent. There has been significant increase in both wet and dry spells. The 2014 paper compared Indian Meteorological Department data over two periods: 1951 to 1980, and 1981 to 2011.

Graph 1: Depicting severity of wet spells and frequency of dry spells
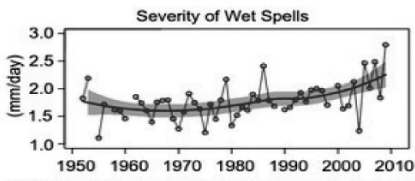
Evidence of an increasing trend in a measure of severity of wet spells over central India. Wet spells are events with above average rainfall for at least 3 consecutive days or more.

We see in this graph an increasing trend in the number of occurrences of dry spells in each year over central India. Dry spells are events with below average rainfall for at least 3 consecutive days or more.

Images: Deepti Singh

A study by M N Rajeevan recording a long term increasing trend of 6 per cent per decade in dry spells. Such conditions increase the risk of floods and droughts.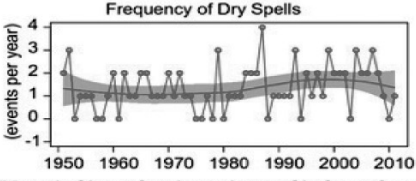 Increase in dry spells can also have a substantial impact on crop yields, as has been noted in many places such as Maharashtra and Andhra Pradesh. It can lead to crop failures particularly at certain growth states when crops are particularly vulnerable.

Table 3: Damage caused due to floods, cyclonic storms between 2000-2010

Table 1.5: Year-wise damage caused due to floods, cyclonic storms, landslides etc. during last ten years in India

Year	Live Lost human (in No.)	Cattle Lost (in No.)	Houses damaged (in No.)	Cropped areas affected (in Lakh hectares)
2001-02	834	21,269	3,46,878	18.72
2002-03	898	3,729	4,62,700	21.00
2003-04	1,992	25,393	6,82,209	31.98
2004-05	1,995	12,389	16,03,300	32.53
2005-06	2,698	1,10,997	21,20,012	35.52
2006-07	2,402	4,55,619	19,34,680	70.87
2007-08	3,764	1,19,218	35,27,041	85.13
2008-09	3,405	53,833	16,46,905	35.56
2009-10	1,677	1,28,452	13,59,726	47.13
2010-11	2,310	48,778	13,38,619	46.25

Source: Ministry of Home Affairs (MHA)

Source: Disaster Management in India, Ministry of Home Affairs, 2011

Table 4: State-wise Crops Affected (lakh hectare) due to cyclonic storms/ floods/ rains/ landslides

State	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	Total
Andhra Pradesh	8.13	1.93	2.82	12.07	-	8.37	13.12	3.30	49.74
Arunachal Pradesh	-	0.28	-	1.64		0.13	2.20	0.80	5.05
Assam	0.11	6.75	.298	1.87	4.17	3.28	0.013	3.67	20.161
Bihar	0.75	16.62	-	0.32	-	0.08	4	1.16	22.93
Chhattisgarh	10.15	0.026	-	-	-	-	-	-	10.176
Gujarat	7.47	4.68	0.029	0.67	-	-	-	-	12.849
Goa	5	-	0.034	-	-	-	0.04	-	5.074
Haryana	-	-	0.083	1.31	-	-	-	-	1.393
Himachal Pradesh	0.94	1.13	-	0.26	1.56	1.57	-	-	5.46
Jammu and Kashmir	0.61	-	-	0.14	-	-	-	6.48	7.23
Jharkhand	0.03	0.01	0.39	0.0014		-	-	-	0.4314
Karnataka	1.55	5	24.22	0.14	-	-	2.27	0.91	34.09
Kerala	0.24	0.38	0.39	0.03	1.18	.172	0.11	0.20	2.7
Madhya Pradesh	-	0.04	-	-	-	-	9.25	-	9.29
Mizoram	-	0.04	-	0.02	-	-	-	-	0.06
Maharashtra	12.59	-	8.79	-	-	-	7.49	-	28.87
Meghalaya	-	-	-	-	-	-	-	-	0
Nagaland	-	-	-	-	-	0.97	0.08	0.31	1.36
Odisha	3.09	3.19	1.33	0.3	4.19	0.02	11	3.65	26.77
Punjab	0.02	0.28	0.06	0.84	-	0.02	4	1.06	6.28
Sikkim					0.14	0.1	-	-	0.24
Rajasthan	17.36	-	-	-	-	-	-	-	17.36
Tamil Nadu	17.37	-	-	-	2.12	0.173	-	-	19.66
Tripura	-	-	-	-	-	-	-	0.015	0.015
Uttar Pradesh	-	5.13	4.61	8.15	5.25	0.04	7.97	5	36.15
Uttarakhand	-	-	-	5.02	-	0.3	0.36	0.13	5.81
West Bengal	0.45	24.91	4.47	0.3	0.09	0.02	1.31	0.508	32.058
Puducherry	-	2.15	-	0.01	0.17	-	0.003	-	2.33

Source:Table prepared from annual reports of several years, Ministry of Home Affairs

For the purpose of this report the following parameters have been generated to look at the state-wise crops affected (lakh hectare) due to cyclonic storms/ floods/ rains/ landslides between 2007 and 2015:

Low: 0 to 10 (lakh hectare)

Moderate: 10-20 (lakh hectare)

High: Above 20 (lakh hectare)

IV. Issues of Land Degradation and Desertification

Desertification is land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities leading to loss of productive ecosystem and biodiversity.

Land degradation has long been recognized as major environmental problem affecting the livelihood of people, especially agriculture. Number of anthropogenic factors such as over -cultivation, overgrazing, deforestation and poor irrigation practices are responsible for land degradation and desertification. There is also growing recognition of the part played by climate change such as prolonged or frequent droughts aggravating land degradation. Warming of air temperatures and decreases in precipitation can cause drought conditions and prevent the sustained growth of vegetation.With climate change leading to increased temperature, and drought conditions, as well as flash floods that are stronger, more frequent and widespread are destroying the land. This is because, under drought conditions the land becomes extremely dry (or desiccated) meaning that its surface layers often become fragmented (unconsolidated or friable) and susceptible to erosion. When the rain falls, and flash flood events occur, much of this material prepared under drought conditions is very quickly swept away, further degrading the land surface.

The fifth national report on desertification, land degradation and drought conceded that 68 per cent of the country is prone to drought, and this will be further heightened because of the impact of climate change, particularly in dry lands."Desertification and loss of biological potential will restrict the transformation of dry lands into productive ecosystem.This led formally defining desertification as "land degradation in Arid, Semi-Arid and Dry Sub-Humid areas resulting from various factors, including climatic variations and human activities" which is used as the basis of the UNCCD (United Nations Convention to Combat Desertification). Satellite imageries analysed over a period of eight years have stated that 30 per cent of the Total Geographical Area (TGA) in India was going through desertification, according to the study 'Desertification and Land Degradation Atlas' led by ISRO.

Rajasthan, Maharashtra, Jammu and Kashmir, Karnataka, Jharkhand, Odisha and Gujarat have shown highest degradation / desertification while Tamil Nadu, Uttar Pradesh, Goa, Tripura, Kerala, Punjab, Sikkim, Mizoram, Haryana show lowest desertification. Rajasthan, Odisha, Uttar Pradesh and Telangana have showed improvement. The most significant process of desertification/ land degradation in the country is water erosion followed by vegetation degradation,and wind erosion. In 2003-2005, the total area of desertification was 94.53 mha and in 2011-2013, 96.40 mha is undergoing desertification.

Map 6: Desertification/ Land Degradation Status of India 2003-05

Desertification and Land Degradation Atlas of India

DESERTIFICATION / LAND DEGRADATION STATUS MAP OF INDIA - 2003-05

Symbol	Code	Description
	Fv1,2	Forest, vegetation degradation
	Gv1,2	Grassland / Grazing land, vegetation degradation
	Sv1,2	Land with scrub, vegetation degradation
	Iw1,2	Agriculture irrigated, water erosion
	Dw1,2	Agriculture unirrigated, water erosion
	Fw1,2	Forest, water erosion
	Sw1,2	Land with scrub, water erosion
	Bw1	Barren, water erosion
	Ew1	Dune / Sandy area, water erosion
	Ie1,2	Agriculture irrigated, wind erosion
	De1,2	Agriculture unirrigated, wind erosion
	Se1,2	Land with scrub, wind erosion
	Be1	Barren, wind erosion
	Ee1,2	Dune / Sandy area, wind erosion
	Is1,2	Agriculture irrigated, salinity / alkalinity
	Ds1,2	Agriculture unirrigated, salinity / alkalinity
	Gs1,2	Grassland / Grazing land, salinity / alkalinity
	Ss1,2	Land with scrub, salinity / alkalinity
	Bs1,2	Barren, salinity / alkalinity
	Il1,2	Agriculture irrigated, water logging
	Dl1,2	Agriculture unirrigated, water logging
	Fl1	Forest, water logging
	Gl2	Grassland / Grazing land, water logging
	Sl1,2	Land with scrub, water logging
	El1,2	Dune / Sandy area, water logging
	Bg2	Barren, mass movement
	Rf1	Rocky, frost shattering
	If1,2	Periglacial, frost shattering
	Fm1,2	Forest, man made
	Tm1,2	Others, man made
	B	Barren
	R	Rocky
	S	Settlement
	W	Water body/ Drainage
	NAD	No Apparent Degradation

Data Source: IRS AWiFS (2003-05), And larly Information

Prepared by:
Space Applications Centre,/ISRO, Ahmedabad

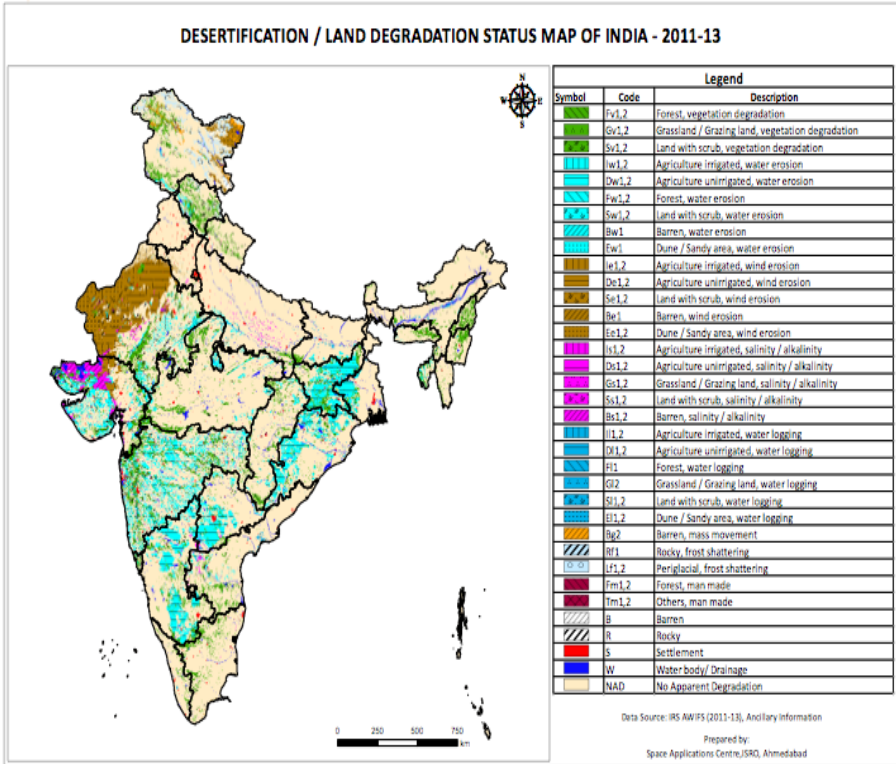## Map 7: Desertification/ Land Degradation Status of India 2011-13

Table 5: State wise Status of Desertification/ Land Degradation (area in ha)

Desertification and Land Degradation Atlas of India

State wise Status of Desertification / Land Degradation (area in ha)

| State Name	Vegetation Degradation		Water Erosion		Wind Erosion		Salinity		Water Logging		Frost Shattering		Mass Movement	
	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05
Andhra Pradesh	1164257	1168447	789433	783830	3986	4722	117952	117239	132334	125755	-	-	-	-
Arunachal Pradesh	120499	107845	-	-	-	-	-	-	-	-	20186	19072	-	-
Assam	471958	322540	31424	31424	-	-	-	-	186667	193669	-	-	-	-
Bihar	242525	255073	321175	304364	-	-	-	-	106628	78450	-	-	-	-
Chhattisgarh	1348089	1348122	783645	770387	-	-	-	-	-	-	-	-	-	-
Delhi	9980	9980	-	-	-	-	-	-	347	347	-	-	-	-
Goa	138172	132301	33889	33892	-	-	-	-	9005	9003	-	-	-	-
Gujarat	2319826	2255417	3859497	3788099	1177105	1179548	2645405	2643828	3375	3375	-	-	-	-
Haryana	41411	40514	13568	13568	151797	148151	27841	27841	12530	8822	-	-	-	-
Himachal Pradesh	1790803	1582938	268261	233990	-	-	-	-	-	-	332423	322417	-	-
Jammu and Kashmir	1951000	1907187	146932	110222	1670244	1650577	-	-	70563	46548	2968279	2750257	927986	843554
Jharkhand	1379038	1307162	4036785	4037261	-	-	-	-	-	-	-	-	-	-
Karnataka	1712386	1704569	5043041	5059629	2159	2159	86740	86582	-	-	-	-	-	-
Kerala	337613	328638	-	-	-	-	-	-	11989	12906	-	-	-	-
Madhya Pradesh	2523801	2514983	1125418	1120221	-	-	-	-	7788	7788	-	-	-	-
Maharashtra	4884005	4890778	8060753	7622800	-	-	29089	30054	-	-	-	-	-	-
Manipur	575603	574706	8070	8070	-	-	-	-	5026	5026	-	-	-	-
Meghalaya	435527	414659	53149	54046	-	-	-	-	1548	5881	-	-	-	-
Mizoram	167050	81854	8119	7444	-	-	-	-	-	-	-	-	-	-
Nagaland	778421	637957	-	-	-	-	-	-	-	-	-	-	-	-
Orissa	745122	752929	4409413	4442556	-	-	-	-	36439	36439	-	-	-	-
Punjab	32561	18705	14116	1897	-	-	-	-	-	-	-	-	-	-
Rajasthan	2606221	2596003	2116314	2116082	15197874	15332054	363768	365666	18421	18421	-	-	-	-
Sikkim	74318	74205	-	-	-	-	-	-	-	-	3730	3730	-	-
Tamil Nadu	1385478	1368330	6411	6411	30429	30429	9878	9878	-	-	-	-	-	-
Telangana	541145	538533	2854285	2951871	-	-	86514	81917	-	-	-	-	-	-
Tripura	236374	125058	186900	189533	-	-	-	-	-	-	-	-	-	-
Uttar Pradesh	413476	414176	586961	610989	-	-	307571	636202	33620	33907	-	-	-	-
Uttarakhand	606616	545610	11943	11943	-	-	-	-	-	-	13786	13786	-	-
West Bengal	265277	264325	1329539	1299542	-	-	-	-	17627	13261	-	-	-	-
Total	29298553	28283544	36099042	35610069	18233594	18347639	3674759	3999206	653908	599597	3338404	3109262	927986	843554

Desertification and Land Degradation Atlas of India

State wise Status of Desertification / Land Degradation (area in ha)

State Name	Manmade		Barren/Rocky		Settlement		Total Area under Desertification (ha)		Total Area under Desertification (%)		No Apparent Degradation	
	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05	2011-13	2003-05
Andhra Pradesh	20833	20565	20521	20521	49441	26649	2298758	2267728	14.35	14.16	13447078	13476591
Arunachal Pradesh	-	-	-	-	13247	9769	153933	136686	1.84	1.63	8144850	8162237
Assam	-	-	-	-	26548	24583	716596	572215	9.14	7.30	6591013	6735134
Bihar	984	984	-	-	23496	20669	694809	659539	7.38	7.00	8511828	8527091
Chhattisgarh	40541	31972	7222	7222	31656	18685	2211153	2176388	16.36	16.10	11130592	11166012
Delhi	-	-	-	-	79541	63187	89868	73514	60.60	49.57	57307	73661
Goa	3374	3374	-	-	8533	7889	192973	186458	52.13	50.37	168648	174991
Gujarat	51637	50524	39218	39218	165578	117447	10261641	10077455	52.29	51.35	8533439	8718876
Haryana	5962	4894	-	-	85855	70792	338964	314583	7.67	7.12	4082236	4106617
Himachal Pradesh	656	656	-	-	2097	1365	2394240	2141366	43.01	38.46	3123624	3376690
Jammu and Kashmir	-	-	218679	218679	15924	11790	7969607	7538814	35.86	33.92	14027316	14455333
Jharkhand	52734	49730	-	-	30169	24503	5498726	5418657	68.98	67.97	2398866	2469577
Karnataka	20876	18704	3389	2887	82409	66413	6951000	6940943	36.24	36.19	11984329	11994157
Kerala	-	-	-	-	29984	28968	379587	370512	9.77	9.54	3455238	3464358
Madhya Pradesh	19454	16024	31495	30457	96359	82379	3804315	3771853	12.34	12.24	26502030	26648676
Maharashtra	19912	19912	506163	509789	326013	275272	13825935	13348604	44.93	43.38	16415568	16873660
Manipur	-	-	-	-	13260	5290	601959	593093	26.96	26.56	1613978	1622844
Meghalaya	-	-	-	-	4656	4239	494880	478825	22.06	21.35	1746580	1762634
Mizoram	-	-	-	-	12285	6575	187453	95873	8.89	4.55	1903762	1998679
Nagaland	-	-	-	-	8257	4347	786678	642304	47.45	38.74	869562	1013937
Orissa	63851	51445	5128	5053	44161	33481	5304114	5321903	34.06	34.18	9758929	9741425
Punjab	1641	652	-	-	96335	71861	144653	93115	2.87	1.85	4849651	4901242
Rajasthan	53058	50865	1052374	1047818	118482	98696	21526512	21625604	62.90	63.19	12546925	12448140
Sikkim	-	-	-	-	700	546	78749	78482	11.10	11.06	630234	630500
Tamil Nadu	13965	13965	515	515	97223	87133	1543898	1516660	11.87	11.66	11344261	11371500
Telangana	16982	14592	1979	1979	97951	69591	3598856	3658482	31.34	31.86	7689491	7631019
Tripura	-	-	-	-	13854	12711	437128	327302	41.69	31.21	608776	716717
Uttar Pradesh	5970	4028	-	-	181399	135962	1528997	1835263	6.35	7.62	22115961	21831845
Uttarakhand	-	-	-	-	15908	9903	648253	581241	12.12	10.87	4667750	4738936
West Bengal	15102	14112	-	-	106386	90941	1733931	1682181	19.54	18.95	6884910	6926022
Total	407531	366998	1886682	1884137	1877708	1481638	96398166	94525643	29.32	28.76	225804731	227759103

Graph 2: Comparison of Land Degradation Status
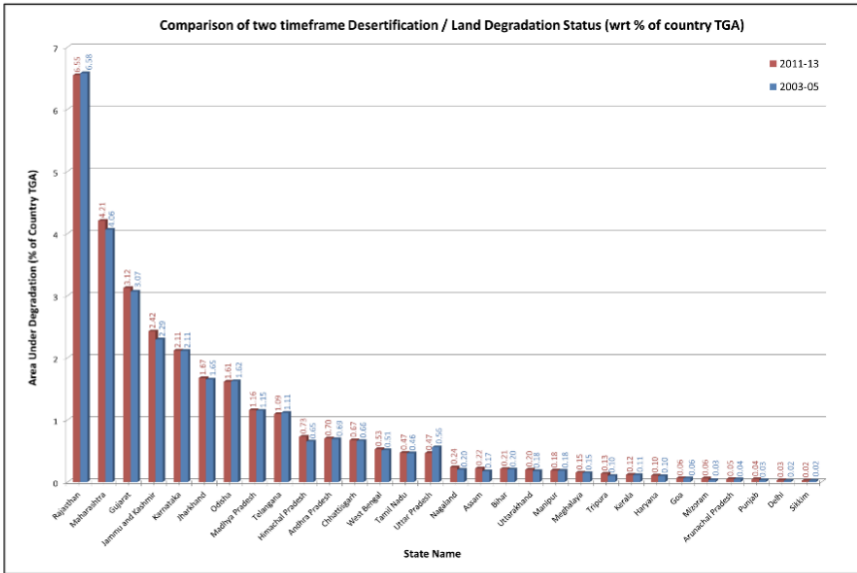
Source: Desertification and Land Degradation Atlas of India (2014)

For the purpose of this report, the following parameters are being considered to look at the area under degradation (% of country TGA)
Low: 0% to 0.5%
Moderate: 0.5%-1.5%
High: 1.5% and above

V. Food Security Vulnerability to Climate Change in Agro-Ecological Zones

This part of the study will consider the agro-climatic zones deal and super impose the five parameters—rainfall declining threat, temperature change, extreme events, desertification of land and capacity building by the civil society to find out the impact of food security due to climate change.

Map 8: Agro Ecological Zones of India

Arid Ecosystem	**1** Western Himalayas (Cold Arid)
	2 Western Plain and Kutch Peninsula
	3 Deccan Plateau (Hot Arid)
	4 Northern Plain and Central Highlands
	5 Central (Malwa) Highlands and Kathiawar Peninsula
Semi-Arid Ecosystem	**6** Deccan Plateau (Hot Semi-Arid)
	7 Deccan Plateau and Eastern Ghats
	8 Eastern Ghats (TN Uplands) and Deccan Plateau
	9 Northern Plain
	10 Central Highlands (Malwa and Bundelkhand)
	11 Deccan Plateau and Central Highlands (Bundelkhand)
Sub-Humid Ecosystem	**12** Eastern Plateau (Chhattisgarh)
	13 Eastern (Chhota Nagpur) Plateau and Eastern Ghats
	14 Eastern Plain
	15 Western Himalayas (Warm Subhumid)
Humid-Perhumid Ecosystem	**16** Assam and Bengal Plains
	17 Eastern Himalayas
	18 North-Eastern Hills (Purvachal)
Coastal Ecosystem	**19** Eastern Coastal Plains
	20 Western Ghats and Coastal Plains

Table 6: Agro Ecological Regions in India

Natural Resources

Table 1.3: Agro-ecological regions in India

Eco-system	Region	States represented	Eco-region	Soil type
Arid	1. Western Himalaya 2. Western plain, Kutch and part of Kathiawar Peninsula 3. Deccan plateau	Jammu & Kashmir, HP Gujarat, Rajasthan, Haryana, Punjab AP, Karnataka	Cold arid Hot arid Hot arid	Shallow Skeletal Desent & Saline Red &Black
Semi-arid	4. Northern plain and Central Highlands including Aravallis 5. Central (Malwa) Highlands, Gujarat plains & Kathiawar Peninsula 6. Deccan Plateau 7. Deccan (Telangana) Plateau and Eastern Ghats 8. Eastern Ghats, TN uplands and Deccan (Karnataka) Plateau	Gujarat, Rajasthan, UP, MP, Haryana, Punjab Gujarat, MP Karnataka, AP, Maharashtra, MP AP Karnataka, TN, Kerala	Hot semi-arid Hot semi-arid Hot semi-arid Hot semi-arid Hot semi-arid	Alluvium- derived Medium & Deep black Shallow and Medium (with inclusion of deep) black Red & Black Red loamy
Sub-humid	9. Northern plain 10. Central Highlands (Malwa, Bundelkhand & Eastern Satpura) 11. Eastern Plateau (Chhattisgarh) 12. Eastern (Chhota Nagpur) Plateau and Eastern Ghats 13. Eastern plain 14. Western Himalayas	Bihar, UP, Punjab MP, Maharashtra MP Orissa, W. Bengal, Bihar, MP, Maharashtra UP, Bihar J&K, HP, UP	Hot sub humid (dry) Hot sub humid Hot sub humid Hot sub humid Hot sub humid (moist) Warm sub humid (to humid with inclusion of per humid)	Alluvium- derived Black & Red Red & Yellow Red & Lateritic Alluvium- derived Brown forest and podzolic
Humid-per humid	15. Bengal and Assam plains 16. Eastern Himalayas 17. North Eastern Hills (Purvanchal)	West Bengal, Assam Arunachal Pradesh, Sikkim, W. Bengal Tripura, Mizoram, Meghalaya	Hot sub humid (moist) to humid (inclusion of per humid) Warm per humid Warm per humid	Alluvium- derived Brown and Red hill Red and Lateritic
Coastal	18. Eastern Coastal plain 19. Western Ghats & Coastal plain	TN, Puducherry, AP, Orissa, W. Bengal Kerala, Goa, Daman & Diu, Maharashtra, Gujarat, Kerala	Hot sub humid to semi-arid Hot humid per humid	Coastal Alluvium-derived Red, lateritic and alluvium- derived
Island	20. Island of Andaman- Nicobar and Lakshadweep	Andaman-Nicobar and Lakshadweep	Hot humid per humid	Red loamy and sandy

Source :   1.   *Fertiliser Statistics, 2010-11*, The Fertiliser Association of India, New Delhi.
2.   National Bureau of Soil Survey and Land Use Planning (ICAR), Nagpur.

A. **Arid Ecosystem**

1. **Cold Arid Region**: The region comprises Western Himalayas, Jammu and Kashmir and Himachal Pradesh. The length of growing period is not more than 90 days annually and there is nutrient imbalance in crops. During the short agricultural season, between May and September, barley and wheat are cultivated as the staple crops on irrigated terraces. Vegetables – especially turnip, cabbage, potatoes, onions, carrots and green leafy vegetables – are cultivated in kitchen gardens. The arid conditions persist with small glaciers present at high altitudes. Despite their small size, the water stored in these glaciers determines the potential for irrigated crop cultivation, which forms the basis for regional food security and socio-economic development. In the years of low precipitation, snow melt from the glaciers becomes the only water source. Any change in the supply of glacial-melt water poses a serious threat to agriculture, and therefore to the economy and food security. The 2010 floods ravaged many irrigation canals and reservoirs. It inundated agricultural fields with rock and sand (mudslides), rendering them unsuitable for further cultivation. Uncertain snowfall has led to loss of many livestock in the region.People in the region could face severe water scarcity which is attributed to heavy runoff of from faster snow melt. Furthermore, in case of increasing temperatures, there can be an increase in the incidence of pest attacks and weeds (Norboo 2014).

   According to the IMD data, the annual mean temperature has decreased between 1951 and 2010. The temperature during the winter season has shown an increasing trend. In terms of precipitation, the annual rainfall has shown moderate trends with increasing in Jammu and Kashmir but decreasing in Himachal Pradesh. The monsoon rainfall in the zone has decreased, however. Distribution of rainfall has become erratic. The percentage of land under degradation is also high and increasing.

   Kashmir is a saffron producing region, second only to Iran in terms of production. However, it is facing a decline of saffron industry due to erratic rainfall and drought like situation (Hussaini 2014). Kashmir faced an acute drought in 1999–2003,and during this period productivity of saffron reduced from 3.12 kg hato 1.57 kg ha. During 2005, favourable rainfall improved saffron productivity to 2.96 kg ha. Saffron is still grown as rainfed crop, and hence vulnerable to scarcity / surplus of water. The surplus of water is as detrimental as the scarcity. Heavy rains over a short period on poorly drained saffron soils pre-dispose saffron corms to rotting fungi like *Rhizoctoniacrocorum*, *Phomacrocophila*,*Macrophominaphaseolina*,

*Fusariummoniliforme*var*intermedium*, a non-sporulatingbasidiomycetous fungus,*etc.*

Another study conducted by Negi et. al. (2016), took a sample of 54 villages from 9 mountainous districts to qualitatively assess the perception of local people regarding climate change. The findings revealed that people know that the climate has changed, not because they know much about global warming or reports of rapidly receding Himalayan glaciers, but because of their long experience with the realities of the local environment.

Table 7: People's Perception on Indicators of Climate Change in the Study

Indicators	% of respondents		
	Yes	No	Neutral
Has the climate changed?	80	15	5
Increase in temperature	80	10	10
Decrease in snowfall	85	10	5
Erratic rainfall/shift in rainfall	90	5	5
Shift in crop maturation	80	10	10
Decline in plant diversity	62	22	16
Increase in pest/disease in crops	85	10	5
Change in agricultural land use	90	5	5
Decrease in water availability	85	10	5
Change in agrobiodiversity	90	5	5
Decrease in forest resources	86	12	2
Change in phenology	64	12	24

Capacity Building: The study by Negi et. al (2016) revealed that climate change led to new agricultural practices but those involved high production cost, application of chemical fertilizers, diseases in plants, decline in forage and fodder quality. All these practices resulted in male-out migration from rural to urban areas. However, locals in the area are involved in cultivation of vegetables like pea, cauliflower and cabbageat higher altitudes, papaya, banana, mango, litchi at middle altitudes. Additionally, higher quantity of seeds arebeing sowed to maintain higher density of plants to deal with high mortality due to drought conditions. Weed is being recycled into soil for manuring and retaining moisture. Barley has been replaced by green pea in middle and high altitudes and wheat replaced by improved variety of mustard. The study by Husseini (2014) stated that using biotechnology, agronomic practices that increase carbon sequestration can become easy to adopt and as such render additional benefits too, like increased root biomass, soil organic matter, water and nutrient retention capacity, and, hence, increased saffron productivity. Enhancing carbon sequestration

capacity in degraded saffron lands through organic means could thus have direct environmental, economic and social benefits for local people, with consequent improvement in their livelihood and food security status.

Establishment of symbiotic relationships between microorganisms and plants has shown promising potential for enhancing tolerance of plants to disease and drought. The beneficial effect of mycorrhization on plant drought tolerance is caused by the development of superior root system, enhanced water conducting capacity, increased uptake of macro, micro, and immobile nutrients, resulting in better carbon dioxide assimilation and higher photosynthetic rates. Among the promising bacteria that can be included into the saffron management practices *Pseudomonas* ssp. and *Bacillus* ssp. are particularly important owing to their beneficial influence. Among the symbiotic fungi, *Piriformosporaindica* and *Sebacinavermifera* should be studied.

Modern genetic modification techniquescan be used to create saffron plants that possess inbuilt tolerance to biotic and abiotic stresses, and hence make these plants resilient to some adverse effects of climate change.

The available data predicts **low vulnerability** to food security due to climate change

2. **Western Plain and Kutch Peninsula/ Hot Arid: Desert, Saline Soil:** This area is the south western Haryana, Punjab, western Rajasthan, Kachchh peninsula(Gujarat). It is characterised by hot summer, and cool winter. There is huge water deficit with precipitation less than 400 mm. It hasrain-fed mono cropping. The crops that are cultivated are pearl millet, chari (fodder) and pulses, and are cultivated in non-saline areas. Where irrigation is available, cotton, sugarcane, mustard, wheat and gram are cultivated.

According to the IMD data, there has been an increase in temperature in these areas. There has also been decrease in annual rainfall. Summer rainfall has increased in parts of western plain (Rajasthan) but decreased in Gujarat. Monsoon rainfall on the other hand has decreased in Rajasthan and increased in Gujarat between 1951 and 2010. Post monsoon rainfall has decreased throughout. The areas have also been receiving more intense rainfall (that may or may not be attributed to climate change) that have led to floods. In July 2017, the zone was hit by flooding. Flooding leads to water washing away the salt present in the sand, thereby making the water gradually becoming more saline and decreasing availability of fresh water. Thar Desert experienced unusual flooding during August 2006. The

climate change also caused unusual flooding in parts of western Rajasthan. The floods have already formed three large lakes covering about 7 to 8 square km in Kawas, Malwa, and Uttarlai, all in the Barmer district. Which is destructive to the ecosystem and affects livelihoods adapted to live with water scarcity. There has been an increase in arid areas in Gujarat and a decrease of arid regions in Haryana. Rajasthan and Gujarat along with other seven states account for 24 per cent of the total desertification. In Rajasthan more than 50 percent land is under desertification (Quint 2016) but the state has shown improvement since 2003.

Crop cycles have been altered and the cultivation in rain fed areas which account for nearly 60 per cent of Indian agricultural system is detrimentally affected due to delayed onset of monsoon. A Study looked at shift in cropping pattern in the last 20 years in Jaggar Watershed, Karauli District (Eastern Rajasthan) due to change in climate as well as decline in availability of water for irrigation. According to that, climate change has resulted in land degradation and making rain-fed agriculture more vulnerable. Decline in water table has also affected agriculture land leading to shrinkage in its area (Javedet. al. 2012).

Table 8: Status of Water Table, Change in Crop Yield and Crop Patterns

Table 2. Status of water table, change in crop yield and crop pattern.

Name of the Village	Depth to Water table		Decrease in yield (%)	Crops grown	
	20 years back	Presently		Presently	20 Years back
Atak	100'	300' - 400'	25	Sesame seeds, Pearl millet, Wheat, Muatard	Gram, Pigeon pea, Groundnut
Dughati	170'	100'	30	Sesame seeds, Pearl millet, Wheat, Muatard, Gram	Pigeon pea, Masoor, Groundnut
Hukmikheda	60' - 70'	170' - 350'	30	Sesame seeds, Sorghum, Pearl millet, Wheat, Mustard	Sugarcane, Groundnut, Green gram
Karsoali	80' - 90'	200'	31	Sesame seeds, Pearl millet, Wheat, Muatard, Gram	Sugarcane, Groundnut
Khareta	90' - 110'	175'	31	Sesame seeds, Maize, Pearl millet, Wheat, Mustard	Groundnut, Gram
Lahchora	80' - 90'	175' - 200'	35	Sesame seeds, Pearl millet, Wheat, Mustard, Gram	Sugarcane, Groundnut
Liloti	100'	300' - 400'	34	Pearl millet, Sesame seeds, Mustard, Wheat	Groundnut, Pigeon pea, Gram
Mukandpura	70' - 80'	175'	27	Sesame seeds, Pearl millet, Wheat, Mustard	Green gram, Pigeon pea, Gram, vegetables
Jhirna	100'	350' - 400'	30	Sesame seeds, Pearl millet, Wheat, Mustard	Gram, Pigeon pea
Arini Gujar	150'	175'	36	Pearl millet, Wheat, Mustard	Gram, Pigeon pea, Green gram

According to Mahato (2014), a 2°C rise of temperature in Rajasthan was estimated to reduce production of pearl millet by 10-15 per cent. In the absence of adaptive capacity and civil society in place, the **zone is vulnerable to food security.**

3. **Deccan Plateau (Hot Arid):** The zone comprises of Bellary district, south-western parts of Bijapur district and Raichur district of Karnataka and Anantapur district of nearby Andhra Pradesh comprise of this zone. It is rain-fed and crops cultivated are pearl and millet. The region has hot and dry summer and drought condition. The rainfall varies from 50 to 60 cm. Over the years the zone has shown a trend of decreasing rainfall. In all the districts namely Bellary, and Raichur rainfall showed decreasing trend during the period of study from 1983-84 to 2012-13 (Tirlapur et al 2017). This has an effect on the rain-fed agriculture and water storage. The rainfall in the area is showing a declining trend that would affect the cropping pattern, food production, water availability and health in the area. Lack of rainfall affects the cultivation of sunflower, Bengal gram, wheat, paddy and cotton. There is risk of crop failure due to dry spells. Declining rainfall is converting the cultivable land into fallow, barren and other non-cultivable waste lands.

    The region has also witnessed youngsters being employed in mining and related industrial activities. Agriculture is taken up by older men and women folk. Shortage of labor, falling returns due to low crop yields and price constraints have impacted agriculture negatively, resulting in food insecurity and poor nutrition. Studies have predicted a temperature rise of 2 degree Celsius or more, increase in dry spells and unseasonal rains are predicted for Bellary district for 2021-2050 escalating future farming risks.

    Adaptive Capacity: ICRISAT along with the Karnataka State Department of Agriculture, District Watershed Development Department, NGOs and the local community has undertaken watershed interventions in four villages covering 7,000 hectares. Interventions include, creating automatic weather stations, rainfall measurement at watersheds quantities, moisture availability in different phases of crop growth. It helps farmers schedule irrigation. For the purpose, data on rainfall, air and soil temperature, solar radiation and wind velocity and direction is collected. Additional data is collected from rain gauges. A hydrological gauging station to monitor the run-off rate and soil loss has been created. Trained farmers monitor groundwater levels at selected wells at fortnightly intervals. Structures for water management and harvesting such as check dams, bunds, farm ponds, and percolation tanks, bore-well recharge pits and waste water

treatment tanks have been built. Designing of tanks was also undertaken. Water harvesting structures constructed in watersheds resulted in 18,500 cubic metre net storage capacity and 45,000 cubic metre gross water conserved due to refilling in rainy season. Farmers also applied missing micro nutrients such as gypsum, zinc sulphate and borax to their fields that resulted in increase of yields in groundnut by 19% and 27% in maize in 2015.To control dust from mining activities, avenue plantation was done and 18,100 horticulture plants were planted. Animal health programs were taken up to increase milk yield and higher fat content.

Such adaptations are being organised at a small scale. Most farmers in the region are still struggling to cope with climate related stresses such as delay in rainfall, moisture stress and drought so they were leaving land fallow or shifting to low yielding water stress resistance crop.**Till the time, the adaptive capacity does not include the whole region, it will stay vulnerable to food security.**

Semi-Arid Ecosystem

4. **Northern Plain and Central Highlands:** The zone comprises Gujarat, Punjab, UP, MP, Haryana, Punjab. It has alluvium derived soils. This area is 35 per cent traditionally rain fed while the 65 per cent is under irrigated agriculture. In the northern plain, tubewell irrigation helps in overcoming droughty climate. Crops (kharif and rabi) grown are rice, millets, maize, pulses, berseem, wheat, mustard and sugarcane. In central highlands (Bundelkhand), about 75 per cent of the net cropped area is subjected to rain fed agriculture and less than 25 per cent is irrigated. Kharif crops like jowar, pigeonpea and soybean and rabi crops of pulses, lentil and wheat are cultivated.

Studies have predicted that the average mean surface temperature in the region can rise between 3.5°C and 5°C by the end of the century. With rising temperatures, semi-arid regions of western India are expected to receive more intense rainfall, while central regions are likely to experience a 10 to 20 per cent decrease in winter rainfall by 2050. The semi-arid ecological regions are already affected by water shortage which have a negative impact on agriculture. This has resulted in declining water table. Rainfall in the region is also declining rapidly with UP being the worst affected.

Rising temperature affects wheat production. Uttar Pradesh, Punjab and Haryana are some of major wheat producing states. A 1°Crise in

temperature can negatively affect wheat yield. Wheat requires long period of low temperatures (November to March) and a moderately high temperature at the time of grain ripening (April). If there is no mechanism or strategy to cope with rainfall variability, then rainfed crops will be more heavily impacted than irrigated ones. The zone is also vulnerable to extreme events such as cyclone, floods, drought etc. There have been predictions that maize yield during the winter season can decrease in the mid Indo-Gangetic Plains as a consequence of increased temperature. Maize yield during monsoon could be reduced by 55 per cent in mid Indo-Gangetic Plains.

In the absence of any civil society initiatives to deal with the changing scenario and high population, the region's food securityis highly vulnerable to climate change.

5. **Central Malwa highlands and Kathiawar Peninsula:** Comprises western areas of Madhya Pradesh, and south-eastern parts of Gujarat and Rajasthan. Drought like conditions persist in Rajasthan, Jhabua and Dhar in Madhya Pradesh and Panchmahal, Bhavnagar and Amreli in Gujarat. Dryland farming results in growth of sorghum, (kharif and rabi), pearlmillet, pigeonpea, groundnut, soybean, maize and pulses (kharif crops) and safflower, sunflower and gram (rabi crops). Wheat is cultivated after irrigation of land.

This region suffers from alkaline soil. The rising temperature and carbon di oxide are having an impact on wheat and maize in these regions. The areas are already affected by water shortage and annual rainfall is increasing in certain areas (Madhya Pradesh) in the zone. While irrigation becomes important, in areas such as Bundelkhand, less than 25 per cent crop is under irrigation. Adding to that, extreme weather events such as floods and cyclones in Gujarat and Rajasthan areas of the zones make agricultural (and human) losses higher. Alkaline soil and sea water inundation are also the factors affecting food security in Kathiawar peninsula.

Food security in the region is vulnerable to climate change

6. **Deccan Plateau (Hot Semi-Arid)**—Most of the central and western parts of Maharashtra, northern parts of Karnataka and western parts of Andhra Pradesh. The zone is characterised by hot and humid summer and mid and dry winter. Parts in Ahmednagar, Bid, Solapur, eastern parts of Sangli, eastern parts of Satara, Osmanabad and Latur in Maharashtra and Bidar, Gulbarga, Bijapur and Dharwad in Karnataka are already drought-

prone. It follows the traditional practice of rainfed agriculture. Sorghum, pigeon pea and pearl millet, sunflower are grown. With irrigation, cotton and groundnut are grown.

Climate change affects rain-fed agriculture much more because of the dependence on rainfall. Rainfall shows high coefficient of variation in dry and semi-arid regions. The Indian summer monsoon has shown decreasing trends in Karnataka and Maharashtra. Along with that the rainfall is erratic. Temperature during monsoon is on rise in these regions. Due to failure of crops, there has been 40 per cent increase in farmer suicides in the area in 2015. Widespread drought is followed by freak rain storms. In 2016, Maharashtra had declared drought conditions in at least 29,000 of its 43,665 villages. Between January and May 2017, 1,129 farmers have committed suicide in the wake of agrarian crisis. **This zone is vulnerable to food security.**

7. **Deccan Plateau and Eastern Ghats:** It includes north and south Telangana plateau, and Eastern Ghat. According to the studies, manifestations of climate change like regular drought conditions, untimely rains and floods, long dry spells and resultant crop failures will be hard on this region. As many as 34 drought prone areas such as-- Nalgonda, Mahbubnagar, Kurnool, Prakasam, Nellore and Cuddapah districts have been identified. The region has rainfed agriculture: sorghum, cotton, pigeonpea, rice, groundnut and castor (kharif crops). After the rainy season, sorghum, sunflower, safflower and oilseeds are cultivated on residual soil moisture. Rice is cultivated in the Rabi season with irrigation.The zone has been experiencing extreme weather events such as flooding. A 2012 flood led to estimated loss of Rs 7 billion in Andhra Pradesh. As many as 0.49 million hectare crops were affected. In 2014, cyclone Hudhud hit the region. In 2009 there was a hailstorm in Ranga Reddy district, AP.

    Adaptive Capacity: In Andhra Pradesh, the farmers across 9000 villages are practicing a cheaper and more sustainable method of agriculture across 1.2 million hectares in the state. The program named Community Managed Sustainable Agriculture (CMSA) is an alternative to the conventional-input intensive-agriculture model. It promotes the use of locally available, organic external inputs—including cow dung, chickpea flour, and palm sap—and the use of traditional organic farming methods such as poly-cropping and systems of rice intensification (SRI) (Jacob 2011). **With these innovative measures, vulnerability to climate change in the region is low.**

8. **Eastern Ghats and Deccan Plateau:**   The zone comprises Tamil Nadu uplands and western portions of Karnataka. Traditional rain fed agriculture helps in cultivation of millets, pulses and groundnut (kharif season) and sorghum and safflower (rabi season).High runoff leads to heavy soil erosion. The soil texture is low and plant available water capacity ranges from low to medium, with the result that severe droughtiness results in the crop growing period. Deficiency of nitrogen, phosphorous and zinc leads to nutrient imbalance. Irrigation is done to grow mostly rice but also cotton and sugarcane. In Tamil Nadu, as reported by Varadan and Kumar (2014), about 60 per cent farmers' crop yield got declined over the years, 23 per cent noticed new pest in paddy and 13 per cent experienced more pest and diseases attack. There has also been an increase in soil salinity that has decreased crop yields by 50 per cent. There has been reduction in rainfall in the region. In Tamil Nadu, assessments indicate a reduction in Maize yield by 3.0%, 9.3%, and 18.3%, in 2020, 2050 and 2080 from current yields.

    Adaptive Capacity: This lead to the change in the cropping pattern of 15 per cent as long duration crop varieties are getting replaced by short duration. There has been a shift from growing sugarcanes to legumes. There has been shift to millet as growing wheat and paddy becomes difficult with increase in temperature. These crops are less water consuming. Many farmers in the TN are shifting to climate smart agriculture. The solution is to go for climate resilient crops, diversifying the crop mix, using technology to reduce water use, enhance soil and cutting down on fertilizer use.**The vulnerability of food security due to climate change is low in the region.**

    Sub humid Ecosystem

9. **Northern Plain:** The zone comprisesnorthern Indo-Gangetic Plain, including Piedmont Plain of the Western Himalayas, Punjab and Rohilkhand Plains, Avadh and South Bihar Plains. Annual rainfall in the region is approximately 1000-1200 mm**.** The Gaya district is drought-prone. Food crops grown feed some 500 million people. It is referred to as India's food bowl. Rice, maize, barley, pigeonpea and jute (kharif season) and wheat, mustard and lentil (rabi season) are grown. Sugarcane and cotton are cultivated at places under irrigated conditions.

    Irrigation water is not carefully used which results in water logging and salinity hazards. There has been decrease of rainfall in Punjab (-0.02 C/year each), Uttar Pradesh (-4.42 mm/year each). The Northern Indian states such as Uttar Pradesh, Punjab, Haryana, Uttaranchal and Himachal Pradesh are some of the major wheat producing states. 1°C rise in temperature could

reduce wheat yield in Uttar Pradesh, Punjab and Haryana. In Haryana, night temperatures during February and March in 2003-04 were recorded 3°C above normal, and subsequently wheat production declined from 4106 kg/ha to 3937 kg/ha in this period. Studies have pointed to a decline or stagnation in the yield of rice-wheat cropping system in Indo-Gangetic plain and north western India have raised serious concern about the region's food supply (Aggarwal et al., 2000; Pathak et al., 2003). These plains are under tremendous stress owing to rapid urbanisation, poverty, and climate change.

Adaptive Capacity: According to studies, conservation agriculture (CA) practices in the region can boost yields at substantially lower production costs and water usage. CA may involve choosing crop varieties that quickly adapt to changing climate and emit lesser quantities of greenhouse gases (GhGs). (Putty 2015) Conservation Agriculture could provide better methods of farming wheat and rice in the Indo-Gangetic plains.

Tripathi and Mishra (2017) conducted a study of three villages in Uttar Pradesh's Faizabad district to investigate farmers' perception of and adaptation to climate change-- Sariyawa, Gauhaniya, and Kinauli. The study observed that farmers noticed changes in warming, rainfall or rainfall variability, and weather or seasonal variability over the preceding 20 years, but most did not know that these changes constitute climate change. The study also revealed that farmers were gradually shifting to different crops such as from sugarcane to peppermint. They also resorted to changing sowing and harvesting timing, cultivation of crops of short-duration, inter-cropping, changing cropping pattern, investment in irrigation, agroforestry—help in adapting agriculture to climate change. Per the research, farmers are passively taking initiatives to adapt to climate change. However, government support can foster networks and/or to form clubs that can bring farmers together in forming adaptation strategies.

With these simple measures the zone can have low vulnerability to climate change.

10. **Central Highlands (Malwa and Bundelkhand):** These two regionscover Madhya Pradesh and part of northern portions of Maharashtra plateau. Rainfed agriculture is common. Rice, sorghum, soybean and pigeonpea (kharif crops) and gram, wheat and vegetables (rabi crops) are grown. Unlike rabi, kharif cropping is totally rainfed. Irrigation helps in cultivation of rice, wheat, gram and cotton.

Both the regions are prone to climate variabilities. Apart from being

rain-fed and vulnerable, the area is backward. It has inadequate water resources and lacks infrastructure. Drought is frequent in the region. Monsoon is a critical determinant of the sowing time. However, it has been varying since several years. Inadequate rainfall is coupled with high run-off rates and poor water retention capacity of the soil.The temperature is also increasing in the zone. Extreme events resulting in destruction of food crops has been high and are under desertification is also high and increasing. Apart from that, the region has small landholdings with 68 per cent small and marginal farmers. Adaptation practices need to be water resource management and agricultural improvements. There is also need to raise climate change awareness among communities. In the absence of these civil society initiatives, the zone's food security stands vulnerable to climate change.

11. **Eastern Plateau (Chhattisgarh and southwest highlands of Bihar):** In Rain-fedtraditional farming, crops like rice, millets, pigeon pea, green gram (moong) and blackgram (urad) and rabi crops like wheat and rice are grown. Chhattisgarh is home to more than 19,000 native varieties of rice. Nearly 4.0 million hectares, which is 83 percent of net sown area and 70 percent of total production, is under paddy cultivation. 20% of the area is under irrigation, and the rest is under rain-fed conditions.

Rain has been moderately declining in the area. A significant population is dependent on rain-fed agriculture, animal husbandry, fisheries, and forest-based livelihoods and thus any changes in rainfall and temperature significantly impacts their lives. Recent evidence shows that the total number of rainy days per year has decreased in the state. Newly established power plants in the region also use canal water, which increases the stress on the already scarce resource.Farmers in Chhattisgarh have started relying more and more on short or medium duration rice varieties. Government representatives blame the monoculture of paddy as a food security threat for the farmers, while farmers blame the unavailability of sufficient canal water as a reason for them to avoid growing a second annual crop. This water insecurity and its impact on livelihoods has been leading to people migrating to other places in search of alternative livelihoods.

Capacity Building Measures Required:

■ Equipping farmers with new skills to help them seek improved or alternative livelihoods in the case of water scarcity or crop failure, without having to move elsewhere.

- ■ Raising awareness regarding the importance of rationalising the use of the little water available in ponds, and the necessity of not polluting it by disposing human and animal waste.

- ■ Raising awareness about the possibility of diversifying their agricultural production by introducing new crops for improving food security and reducing vulnerability.

- ■ Helping to balance the accessibility to the canal water between the farmers and the power plants, such that both activities work in parallel and the gains of the limited resources in both sectors are maximised.

With these measures, zone's vulnerability to climate change can be tackled.

12. **Eastern Chota Nagpur Plateau and Eastern Ghats.** Also includes western portions of West Bengal, Dandakaranya and Garhjat hills of the Eastern Ghats of Orissa and Bastar region of Chhattisgarh. Rainfed farming helps in growth of kharif crops of rice, pulses and groundnut. Irrigation of fields aids in growing rice and wheat as rabi crops. In rabi season, rice (at places) and wheat are cultivated mostly under irrigated condition. The natural vegetation comprises tropical dry and moist deciduous forests. However, rich farmers grow rice, wheat and gram and, at places, cotton using irrigation facilities.

However, the soil is susceptible to severe erosion hazard.Seasonal droughtiness limits optimum crop yields.Cracking clayey soils have narrow workable moisture conditions.Dry tillage and inter-tillage practices are difficult to perform. There is risk of inundation of the cropped areas during rainy season leading to crop failure at places.Soil loss due to heavy runoff during rainy season results in stagnation of water and poor germination.Deficiency of Nitrogen, Phosphorus and Zinc results in nutrient imbalances.In Odisha, agriculture largely depends on nature. As per predictions, climate change can have a negative effect on agriculture. In Orissa, rainfall has become more erratic and less compatible to crop schedules. According to reports, only seven of the last 25 years have received normal or above normal rainfall. The rest have been deficient rainfall years. Disasters have spread to new areas. Floods, cyclones and super cyclones have wreaked havoc for years in the state, drought prone districts like Balangir, Kalahandi, Koraput, Bargarh and Jharsuguda are facing recurrent flash flood furies while heat waves have begun hitting coastal regions.The result of extreme events affecting crops in the zone is high and desertification of land has been moderate but increasing.

13. **Eastern Plain** comprises north-eastern Uttar Pradesh and northern Bihar including Central Himalayan foothills. Rainfed agriculture with cultivation of rice, maize, pigeonpea, moong are common in kharif season. The important cash crops such as sugarcane, tobacco, chillies, turmeric, coriander and potato are usually grown with supplemental irrigation. The natural vegetation comprises tropical moist deciduous and dry deciduous forests. Flooding and imperfect drainage conditions limit soil aeration. Salinity and/or sodicity, occur in patches, and affect crop yields. A Study "Impact of climate change on agriculture in eastern Uttar Pradesh and Bihar states" observed that changes in the maximum temperature may cause the reduction in the yield of rice to the tune of 1 to 1.1 per cent hectare by 2020. Similarly, minimum temperature change may decrease the yield of rice by 1.5 to 1.9% per hectare in Eastern Uttar Pradesh. Role of temperature for wheat production in the state of Bihar is more significant as compared to Eastern Uttar Pradesh (Kumar et. al. 2011). The model predicts that wheat yield may decrease by 5 to 6 per cent in Bihar state due to changes in maximum temperature alone by the end of the year 2080 whereas this decrement in Eastern Uttar Pradesh is expected to be between 1.5-2 per cent. Due to erratic rainfall and uneven distribution, the frequency of floods in Bihar and drought in Eastern Uttar Pradesh are considerably increasing affecting the crop productivity to a great extent. Rice farming in eastern India is therefore most vulnerable and risk prone due to complex ecological situations marked by frequent flood and drought. Currently, no trends in change of annual temperature between 1951 and 2011 have been observed. Desertification of land in the region is also low and decreasing. No information is available on the capacity building measures in the zone. In the absence of any civil society initiatives, the vulnerability remains moderate.

14. **Humid Per humid subsystem (Western Himalyas)**. Comprises Jammu and Kashmir, Himachal Pradesh and northwestern areas of Uttar Pradesh. Rainfed agriculture in valleys and on terraces yield wheat, millet, maize and rice. Paddy and horticultural plantation crops like apples are grown on terraced lands. Himalayan moist temperature, subtropical pine and sub-alpine forests comprise the natural vegetation.Imperfect drainage, Deforestation, Landslides, and Soil acidity plague the region. Over the years, temperature in Himachal Pradesh has gone up. According to a case study, majority of farmers (78 per cent) at low altitude (<2500 m) and 72 per cent at mid altitude (2500–3000 m) reported decline in apple farming whereas majority of farmers (71%) of high hill areas (>3000 m) admitted no decline (Basannagri and Kala 2013).About 24 per cent farmers at low hills

perceived hailstorm as the major deterrent for apple farming whereas 35 per cent farmers at high hills and 30 per cent at mid hills perceived frost as a major cause for damaging apple farming. About 72 per cent farmers at low hills believed that change in climate, especially increasing temperature, was responsible for decline in fruit size and so that the quality. Lacking of appropriate fruit colourwas considered a deterrent factor in maintaining the fruit quality by 39 per cent at high hills. Infestation of pest and diseases such as apple scab, scale root and canker were some the indicators of climate change that increased the cost of production due to increase in use of pesticides and chemical fertilizers at low hills. At low hills pest attack on apple crops was prominent whereas at mid hills apple scab. Apple requires 1200–1500 hours of chilling depending on type of cultivars. The chilling hours <1000 lead to poor fruit formation. Prolonged delay in cold in December and January severely affects the chilling requirements. Many farmers in the region are still following the traditional and age-old practices of cultivation. They are less aware about scientific agro-commercial practices, horticulture schemes and agri-inputs due to lack of communication facilities at high hills. Apart from climate change, the apple production may be declined due to continuation of plantations that have crossed their fruit bearing stage. There is a need for re-plantation of apple trees in a systematic manner on a regular basis (Basannagri and Kala 2013).

Studies have also stated that increase in temperature and precipitation leads to soil loss, nutrient loss and reduces crop yield. A study '*Simulating climate change impact on soil erosion & soil carbon sequestration*' aimed to look at the impact of climate change on soil erosion and carbon sequestering in the Mid Himalyan region. The study was conducted in Maniyar, Fakot and Henwal of district Tehri, Uttrakhand. It showed that 15.54% area was affected with moderate erosion, 17.61% area with moderately high, 16.12% area with high erosion, and 20.72% areas with very high erosion Gupta (2015).

IMD data has stated moderate decline in rainfall in the region, and increase in temperature. Extreme events affecting crops has also been moderate while desertification is increasing in the zone. No information on civil society initiatives is available. In the absence of any capacity building measures, the zone's vulnerability stands moderate.

Humid Per Humid Ecosystem

15. Assam and Bengal Plains

The zone has rice based croppinginBrahmaputra, Teesta and Ganga plains due to the high rainfall in these areas. It is largely rain-fed. Apart from rice, jute, and plantation crops like tea and horticultural crops like pineapple, citrus and banana are cultivated in the northern foothills of the Eastern Himalayas—Teesta and Brahmaputra regions. With the help of irrigation, rice, wheat and sugarcane are grown as rabi crops in Ganga and Teesta plains. In the last few years, rainfall has been erratic in nature with high intensity and at times no rain during rainy season. In Cooch Behar, Khagribadi, due to government initiatives of introducing climate smart agriculture, and digging of farm pounds, agriculture has improved and migration decreased. In Assam, trends of rice production between 2000-01 to 2010-11 show that autumn rice production in the state has decreased annually at the rate 3-7% whereas summer and winter rice production have increased at the rates of 3.82% to 5.02% respectively. Floods and droughts have become a regular phenomenon.

In future, increase in both frequency and intensity of high temperature, along with its large variability, is emerging as a potential threat to the sustainability of rice production. The emerging trends of rain fall indicate that the number of rainy days are decreasing and number and extreme rainfall days are increasing and so is their intensity. It is likely that runoff will be high and as hardly any time will be there for seepage of water into the ground, ground water recharge will go down, therefore extraction of water will be done from deeper levels, making irrigated agriculture vulnerable in Assam.

Exploitation of ground water continuously at higher degrees would lead to soil health problems like acidity, alkalinity, elemental toxicity, etc. Iron and Arsenic toxicities have already been reported in the state. This would ultimately constrain the ground water exploitation. Use of surface water and solar electrical pump operated drip / sprinkler irrigation of harvested rain water remain the last resort of assured irrigation.

Making Agriculture climate resilient has the potential of uplifting rural poverty and enhancing the adaptive capacity of the sector as a whole. The state is working in adopting an integrated adaptation approach byassessing soil moisture, conservation activities, water efficient technologies, redefining crop pattern, integrated disease management practices, train farmers on disaster reduction techniques, etc. More

research in tolerant varieties of paddy that can make them photosynthesis efficient at higher temperatures is required. Farmers should be trained on climate smart packages of practices. Indigenous knowledge on adaptation for integration with modern techniques should be documented and disseminated. Strengthening of cold storage needs to be done. With these efforts, the zone's vulnerability to food security stands low.

16. **Eastern Himalyas:** Comprisesnorthern parts of Assam, Arunachal Pradesh and Sikkim. Millets are cultivated along with potato, maize, millets and paddy. Both rain-fed and irrigated agriculture is practised to grow rice, maize, millets, potato, sweet potato, sesame and pulses in the lower valleys, and at other places, cotton, mesta and sugarcane. Vegetables and plantation crops are grown on hilly lands and medicinal plants and horticultural plants like pineapple, citrus, apple, pear, peach and banana are grown on terraced lands.

Excessive moistureleads to water stagnation in valleys after the rainy season. The steeply sloping landforms lead to heavy runoff and severe erosion.

Climate Change has contributed to unpredictable or erratic rainfall pattern, drying up of local springs and streams, species migration to higher elevations, shift of sowing and harvesting period of crops, emergence of invasive species and incidence of diseases/pests in crops as well as in fodder species in the region.Farmers and herders revealed experiencing warmer summer months in recent times. Seasonal shift of snowfall events and untimely snowfall has severely impacted the Trans-Himalayan subsistence agriculture. Sowing of maize in the sub-tropical zone has shifted by 15-20 days, while sowing at temperate zones remains the same. Similarly, the harvest of maize remains the same in the sub-tropical zone while harvest time has shortened by 15-20 days in the temperate zone. Information on temperature rise and untimely rainfall and its impact on agriculture have been reported by the farmers of the Sikkim Himalaya (Seetharaman 2008). In recent years, large scale colonization of unpalatable species has been observed by the farmers in the temperate zone. There has been colonization of unpalatable species such as *Gnaphalium*sp.,*Iris* sp,*Ageratum houstonianum*, *Erigeron karvinskianus*, *Galinasogaparviora*, *Erichthitesvalarianiifolia*and *Gleolariamaxicana.* The subsistence farming of the Sikkim Himalayan agriculture is under threat. The communities are marginalized with low per capita land holdings (0.12 ha) (Subba 2006). The genetic diversity of the crop species is vulnerable to climate change.

Water security is the second challenge already faced by the mountain communities due to shortage of water for agriculture and drinking purposes. The long, dry winter spells have been a regular trend in recent years. The period between October 2008 and April 2009 was continuously dry with no rainfall and negligible snowfall in the alpine region in Sikkim. Field surveys at different places in Sikkim revealed that a large number of seasonal springs and local water ponds have dried. The temperature in Sikkim has shown a steep increase. Crops affected in the wake of extreme events have been high, while desertification in the area is low, BUT it is considerably increasing.

Adaptation: The Government of Sikkim initiated the Indo-German climate change adaptation project (Tambe 2009). Sikkim is the first Himalayan state to go completely organic by 2015. The department implements a number of schemes including macro-management of agriculture through Integrated Crop Development Programmes (ICDP), Integrated Nutrient Management (INM), Natural Resource Management (NRM) and RastriyaKrishiVikasYojana (RKVY). The seeds of major traditional crops such as rice, wheat, maize, soybean and mustard are being increasingly replaced by HYVs thus causing disappearance of traditional landraces. At Daramdin, a major paddy growing area in West Sikkim, about 30 traditional landraces of rice have been all replaced by HYVs and only *Marsi*(traditional variety) is now cultivated. To mitigate the crises caused by climate change and global warming, the state government has planned to invest in irrigation, infrastructure, improved seeds and manure, agricultural research and development. Thus traditional subsistence farming is being replaced by rapid intensification which is not supported by appropriate changes in inputs or management strategies. The transformation of traditional land use systems coupled with conversion of agricultural land into non-agriculture sector (establishment of factories/ industries etc. in the farm-lands) has created pressure on agriculture biodiversity. At present several developmental programs exist that need to be aligned with the agro-ecological functions for reducing climate change impacts. New technologies for farming, introduction of high yielding and hybrid seeds from outside, distribution of hybrid seeds, Effective Microorganism (EM) technology etc are benefiting a limited number of farmers. Efforts are on to increase the reach of these programmes. With these efforts, vulnerability to climate change is low.

17. North Eastern Hills (Purvanchal)

Rice is the dominant crop grown in valleys. Rice, millets, maize and potatoes as well as plantation crops (tea, coffee, rubber) and horticultural

crops (oranges, pineapple) are cultivated on terraces of hills. Rains help in cultivation of rice and jute in particular. Once the rainy period is over, oilseeds (mustard) and pulses like blackgram, greengram and lentil are grown.

According to the IMD data, there is low threat to declining rainfall trends. Temperature in Mizoram has registered a steep rise but that in Tripura and Meghalaya have shown no trends since 1951. Till now the vulnerability to food security caused by extreme events have also been low. Though one study has predicted that the zone is likely to experience floods magnitude around 25% higher to the present. The number of droughts during the monsoon month has also shown an increasing trend to the tune of around 25%. Many parts of the Brahmaputra basin show a tendency of extreme soil moisture stress during monsoon months, which is likely to lead from moderate to extreme drought condition (Ravindranath et al 2011).

Analysis indicates that the climate change may impact the irrigated rice yields by about –10% to 5%, with majority of the NE region benefiting up to 5% in 2030. On the other hand, the impacts on rainfed rice are likely to be in the range –35% to 5%, with a large area losing by about 10%. Irrigated maize yields are projected to reduce by about 40%. In case of rabi season crops, wheat yields are projected to reduce by up to 20%. Potato yields are likely to marginally increase up to 5% in the upper parts of the NE region due to climate change, but in the central parts projected yield loss is about 4%, and in southern parts of the region the negative impacts will be much higher. Irrigated mustard crop is also projected to lose yields up to 10% in majority of the areas.

There is information gap regarding civil society initiatives in the region. However, the effect of climate change to food security in the region is currently low.

Coastal Ecosystem:

18. **Eastern Coastal Plains**

The Eastern coast has a range of climatic conditions—semi-arid, sub-humid (moist). A rainfall of 900-1100 mm occurs in the coastal parts between Kanyakumari and South of Thanjavur in Tamil Nadu and between north of Chennai, Tamil Nadu and West Godavari, Andhra Pradesh. The eastern coast between Nagapattinam and Chennai and up to north-western part of the coastal strip, including parts of Andhra Pradesh, Orissa and West Bengal, experiences sea water incursions. These have led to food insecurity.

Rainfall has not declined but become increasingly unpredictable and became incompatible with established crop schedules. Only seven of the past 25 years have had normal rainfall. The remaining 17 years were characterised by deficient or delayed monsoon, causing an upheaval in rice production. Drought prone districts such as Balangir, Kalahandi, Koraput, Bargarh and Jharsuguda in Odisha have experienced frequent floods in the prior two decades. Extreme heat events are also being witnessed more often in coastal areas. Sundarbans also fall in eastern coastal plains. They have long been highly susceptible to seasonal ocean currents, tides, waves, winds, and cyclonic storm surges that cause rapid soil erosion on the one hand and salt deposition on the other. This leads to a constantly changing local ecology. Thus, the climatic uncertainty and high anthropogenic pressure resulting from climate change is exacerbating the already high pressures on this region.

Impacts of climate change on irrigated maize in the coastal districts are projected to be much higher with likely yield loss between 15% and 50%, whereas rain-fed maize is projected to lose up to 35%. But, in some districts of coastal Andhra Pradesh, rain-fed maize yield is likely to increase by 10%. Projected increase in seasonal maximum temperature during kharif in these areas is less than 1°C in the 2030 scenario. Rain-fed rice yields are projected to increase up to 15% in many of districts in the east coast.

In the absence of required information on the civil society initiatives in the region, the region's vulnerability to food security cannot be predicted.

19. **Western Ghats and Coastal Plains**

Comprises Sahayadris, western coastal plains of Maharashtra, Karnataka and Kerala and Nilgiri Hills of Tamil Nadu. Tropical moist deciduous forests can be seen in the region. Rice, tapioca, coconut and spices are cultivated. Fisheries and aqua culture is also done in coastal areas.

Research conducted by Indian Agricultural Research Institute (IARI), grain yield of rice will not be impacted by a temperature increase less than 1°C. However, it is slated to decrease by almost a tonne/hectare if the temperature goes up by 2°C. Studies have stated that basmati varieties of rice are particularly vulnerable to temperature induced pollen sterility, and thus to lower grain formation. It stated that the productivity of kharif crops such as irrigated rice in the Western Ghats region is likely to change by +5% to –11% by 2030 scenario depending upon the location. Majority of the region is projected to lose the yields by about 4%. In case of rainfed

rice, the projected change in yield is in the range –35% to 35%, with a large portion of the region likely to lose rice yields up to 10%. Irrigated rice in parts of southwestern Karnataka and the northern-most districts of Kerala are however likely to gain.

Climate change is likely to reduce yields of maize and sorghum by up to 50% depending upon the region. Increase in rainfall in already high- rainfall zones is detrimental to crop production. Further, increased temperature causes reduction in the crop duration due to increased growth rates. Reduced crop duration means less opportunity for the crop canopy to accumulate the photosynthates and thus dry matter. These conditions can cause the reduction in grain yield. In most of the Western Ghats region, the monsoon rainfall is likely to increase up to 15%. However, in the eastern part of the Western Ghats (falling in Tamil Nadu), in addition to greater rise in maximum (~2.2°C) and minimum (~1.7°C) temperatures, rainfall is projected to be reduced by about 20%. These changes in temperature and rainfall cause direct impacts on the production of kharif crop. In the Western Ghats region, coconut is confined to low altitudes with rare presence in mid and high altitudes. In contrast to the annual kharif crops, the yield of coconut, a perennial plantation crop, is projected to increase by up to 30% in majority of the region due to climate change. Goa is vulnerable due to thermal expansion of the oceans combined with rising sea levels due to global warming. There is extreme risk (of climate change) include river flooding and coastal inundation.

No information on the existing capacity building measures are available. Therefore, the vulnerability cannot be predicted.

20. Andaman and Nicobar Islands

In Nicobar group of Islands more than 90 per cent of reported area is under forest cover and the remaining area is available for other uses including agriculture. In Car Nicobar and Katchal over 40 per cent areas is under crops and rest of the islands have cultivable area between 0 -19%. The region practices rain-fed agriculture. Coconut occupies major area of cultivation. The other major crops grown are banana, papaya, tapioca, sweet potato, pine apple etc. The cereals and other food crops like rice, wheat, pulses are imported from outside. The farmers are practicing subsistence farming or natural farming.

High adaptive capacity of the Islands significantly reduces its vulnerability to climate change. This capacity is largely decided by suitable technology adoption, resource availability, awareness level of the society among

other factors. Nicobar group of islands are mainly inhabited by tribals*viz*., Nicobarese and Shompens other than a small proportion of people from mainland India. Among them the Nicobarese are the largest tribal group inhabiting 12 Islands with major concentration in Car Nicobar.

The analysis of the historical rainfall data since 1951 indicated no significant change in the average decadal rainfall though the pattern of rainfall has changed with increase in the number of extreme rainfall events. It highlighted decreasing trend in rainfall and rainy days over Andaman and Nicobar Islands in winter and post-monsoon seasons. Another important effect is sea level rise. The impacts of climate change and weather extremes are experienced in Nicobar Islands in the form of increasing monsoon period depressions, dry spell during post-monsoon period, intrusion of sea water into the fresh water aquifer and coastal lowlands, loss of agricultural land, coastal erosion etc.

Currently, options are in place to address climate changerelated issues such as agricultural diversification through the use of water and nutrient efficient cultivars, modifications in existing cropping systems and adoption of site specific integrated farming systems to diversify the farming systems and also harness the mitigation co-benefits. Integrated Farming System promises to enhance adaptive capacity of local communities as it provides food, nutritional, livelihood and income of farmers apart from reducing risk of total failure of crops in mono-cropped areas due to weather vagaries and or biotic factors such as pest and diseases. Another adaptive mechanism is rain-water harvesting through lined ponds, tank cum ring well, and check dams and its efficient use. Land shaping methods in the coastal areas will address both land degradation and rain water harvesting. Most importantly, encouraging active participation of local communities in capacity building and adaptation strategies will enhance the adaptive capacity. The experience of adapting to inter annual variability should be used in dealing with longer-term mean changes in climate and sea level. These will be successful when integrated with other policies such as disaster preparedness, land-use planning, environmental conservation, coastal planning, and national plans for sustainable development (Velmurugan et. al. 2015). With these the region is not vulnerable to climate change.

Limitations of the Study:

This report is a plot study, a work in progress and it is a hope that in future more studies on the topic will be undertaken and this report can be used as a baseline study for future projections.

Future studies should also consider looking at pests, diseases and weeds as a possible indicator. According to the information available, more than 500 million tonnes of food grains are lost annually due to plant diseases. Studies have also predicted that increase in temperature and rainfall in tropical regions, will lead to pests throughout the year. Climate change is one of the reasons likely to cause a spread of tropical and subtropical weed species into temperate areas and to increase the numbers of many temperate weed species currently limited by the low temperature at high latitudes. The limited research on the subject have predicted that Karnataka, Tamil Nadu and Maharashtra will be the worst affected areas. Increase of Carbon di-oxide will also increase the damage caused by insects. The present study could not incorporate it due to absence of adequate quantitative data in the domain.

A research like this will be holistic only if it is able to connect effect of climate change to food access—storage and availability along with nutritional quality of the grains.

Food grains stored in silos, warehouses, bags, containers, traditional storage structures are affected by several abiotic (temperature, relative humidity, inter-granular CO_2 levels and moisture content) and biotic factors (such as insect pests, fungi, mites and rodents). Climate change can exacerbate these processes. Civil society initiatives to maintain grain quality involves maintaining a well-managed grain storage system to strengthen a stable food grain supply chain. Climate change can also lead to increase in the prices of major crops in some regions. For the most vulnerable people, lower agricultural output means lower incomes. Under these conditions, the poorest will find it most difficult to meet nutritional requirements, or resort to poor coping strategies.

Conclusion

This report is part of the larger study mapping the effect on climate change on food security, water security and displacement. Findings from this report will be juxtaposed with those of water security and displacement and a threat map has been prepared.

India is a large country with diverse climate and two-thirds of its area is rain dependent. There are diverse seasons, crops and farming systems as well as numerous agro- ecological zones, existence of small, fragmented holdings and poor coping mechanisms. These make climate change even more challenging to grapple with. In India, anthropological factors, increasing population,

agricultural lands being used for other purposes, misuse of water resources are greatly responsible for food insecurity. In order to deal with food security and deal with vagaries of climate change, following measures can be taken.

- Productivity: Farm practices need to be reoriented to provide better climate resilience. There is need for stepping up public investment in development and dissemination of crop varieties which are more tolerant of temperature and precipitation fluctuations and are more water- and nutrient-efficient.

- Better management of water resources.

- Greater emphasis on urban food insecurity, related to urban poor.

- Need for a sound Public Distribution System in place.

- Need to invest in climate resilient infrastructure. This involves strategic research on adaptation and mitigation and technology demonstration.

- Better deployment of existing technologies backed by policy initiatives to address short term impacts.

- Safety nets, insurance coverage for the farm, and early warning system need to be set up.

Along with these, it is essential to study local people's perception of climate change. There is huge evidence that people are autonomously changing their crop and cropping patterns to increase their resilience in an increasingly uncertain climatic scenario. However, due to poor communication to extension institutions and programme, their learning experiences is not being disseminated through formal institutional and official channels. Many local adaptation techniques might be used as such while several others can be combined with scientific knowledge generated using modern tools and techniques, to make is more reliable, replicable, and resource conserving in nature. The role of local people should be incorporated more actively in the design of policy and adaptation strategies at national and global level. Therefore, it is much important to know the understanding of local people, and their reaction and adaptation strategies to climate change to sustain their livelihood. There is also a need to develop network with governmental projects, NGOs and other institutions working on climate change to utilize the synergy in the best interest of survival and biodiversity conservation

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Beyond Peace vs. Justice: The Coming of Age of the International Criminal Court
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Abstract

There is an inherent tension between establishing justice and securing peace in contexts of conflict, termed as the perennially irresolvable "peace vs. justice debate." The concurrent pursuit of peace and justice in conflict and post-conflict situations is now manifold more controversial in the case of contemporary international criminal tribunals (ICTs) because they have a permanent and systematic relevance to how peace is achieved and enhanced. The controversy has reached a fevered pitch in the case of the International Criminal Court (ICC) which is the only permanent court of international criminal justice. This article undertakes an assessment of the extent to which the ICC can contribute to peace and concludes that international criminal justice has an unavoidable impact on peace. For this impact to be positively contributory rather than deleterious, the nature and extent of the role of the ICC must be carefully contextualized. A meaningful and continued role depends on an honest acknowledgement of both the existence of a role and its limitations. Emphatic insistence on legalism not only damages the ICC's legitimacy in local contexts but also jeopardizes the continued relevance and potency of the Court in the global order. The argument is that while the ICC is constitutionally judicial, it is

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not an apolitical creature. As such, it must assert itself politically, if only to distinguish itself from prevalent global and local politics.

1. Introduction

In all narratives of human history, there have been many triumphs of civilization over barbarity. Few such triumphs, however, have been as profound in their reaches as international criminal tribunals (ICTs). The primitive equation of power with impunity had followed the advancement of humankind into the 1990s and it was only with the advent of the modern international criminal justice system that the prospect of a new world order seemed more than a mirage.[2] ICTs were thus heard to sound the death knell for the world in which atrocities could be committed with impunity.

However, there is an inherent tension between establishing justice and securing peace in contexts of conflict. The crux of the matter is whether the demands of justice should prevail over the needs of peace or whether the latter deserves precedence over the former. This tension has produced a polarity along which scholarly views have oriented, on the one hand prioritizing peace in view of the potentially destabilizing effect of accountability mechanisms that can exacerbate conflict, and on the other hand, according primacy to justice in the interest of sustainable peace.[3] This timeless controversy has engendered a sprawling body of scholarship which is now subsumed under the lackluster label of "peace vs. justice debate", betraying the weariness of maintaining what is clearly a dubious dichotomy.

The concurrent pursuit of justice and peace in conflict and post-conflict situations is now manifold more controversial in the case of contemporary ICTs because they have a permanent and systematic relevance to how peace is achieved and enhanced. The International Criminal Court (ICC) stands at the evolutionary pinnacle of this new species of ICTs. The ICC offers unparalleled insight into the dynamics of justice and peace as it is the only permanent court of international criminal justice.[4] The Court has thus transformed the previously sporadic and context-specific debate of "peace versus justice" into a permanent and generally relevant inquiry. In addition, the ICC's permanent

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[2] Payam Akhavan, "Are International Criminal Tribunals a Disincentive to Peace? Reconciling Judicial Romanticism with Political Realism," *Human Rights Quarterly* 31, no.3 (2009): 624

[3] Ibid 624

[4] ibid 627

status endows it with a preventive capacity.[5] Hence, the capacity of the international criminal justice system to systematically contribute to peace has been expanded by the ICC to include not only post-conflict peace but also the resolution of active and impending conflicts.

Furthermore, the Court appears to promise a paradigm shift, an erasure of the perceived dichotomy between peace and justice.[6] Thus, the ICC Statute declares a commitment to the peace, security and well-being of the world[7] and it has also been acknowledged that the pursuit of justice impacts upon conflict management efforts[8] and that justice is indispensable to lasting peace.[9] Peace and justice are thus conceived as not mutually exclusive or even competing goals, but rather, as simultaneously achievable.

Against this backdrop, an evaluation of the ICC's impact on peace is now made a matter of urgency given the bold cartography that has been undertaken to remap the Court's jurisdictional borders more expansively. Novel approaches to rethinking the ICC's jurisdictional reach are frequently emerging, from the groundbreaking recognition of the Court's jurisdiction over alleged crimes against humanity committed in Myanmar in the Rohingya crisis[10] to the most recent invocation of the ICC process in the context of the European Union's migration policy as a crime against humanity vis-à-vis refugees and migrants across the Mediterranean.[11] This is an exciting time in international criminal justice scholarship, with the pace of the Court's evolution being matched by the pace of proliferation of jurisprudential insight and innovation. However,

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[5] Rome Statute of the International Criminal Court (opened for signature 17 July 1998, entered into force 1 July 2002) 2187 UNTS 3 (Rome Statute) Art.13(b)

[6] Simon Chesterman, "No Justice without Peace? International Criminal Law and the Decision to Prosecute" in *Civilians in War*, ed. Simon Chesterman, (Boulder, CO: Lynne Rienner, 2001), 145-49.

[7] Rome Statute (n 5) Preamble

[8] "Policy Paper on the Interests of Justice," ICC OTP, accessed June 5, 2019, http://www.icc-cpi.int/nr/rdonlyres/772c95c9-f54d-4321-bf09-73422bb23528/143640/iccotpinterestsofjustice.pdf

[9] Kenneth Rodman, "Justice as Dialogue Between Law and Politics," *Journal of International Criminal Justice* 12 (2014): 437-38

[10] "ICC Pre-Trial Chamber I Rules that the Court may exercise jurisdiction over the alleged deportation of the Rohingya people from Myanmar to Bangladesh", ICC-CPI, accessed June 12, 2019, https://www.icc-cpi.int/Pages/item.aspx?name=pr1403

[11] "EU sued at International Criminal Court over Mediterranean migration policy", Maurice Stierl, accessed June 17, 2019, https://www.academia.edu/39402099/EU_sued_at_Inter-

amidst all these novelties, it is useful to reflect anew on one of the ICC's most fundamental existential paradoxes – where invoked in such crises, is a court of law also to be a court for peace?

This article addresses the overarching question as to the extent to which the ICC can contribute to peace. There are two assumptions that undergird this inquiry. The first assumption is that there is some contribution that the ICC can make in this regard, and second, that it is desirable that such contribution be made. This article critically analyses both assumptions, as the appropriate extent of the role of international criminal justice in building sustainable peace can only be demarcated in the light of what is possible and what is proper for a judicial body tasked with delivering international justice against individual criminal wrongs. Therefore, the article mounts its critical lens from an objective distance to the ICC's present state of politico-legal flux, engaging in a retrospective exercise to appraise the Court's contribution vis-à-vis peace in its pursuit of justice.

The article is divided into five major segments. The next section addresses the capacity question, that is, the extent to which the ICC is able to contribute to peace. The propriety question is dealt with in the third part, which inquires into whether the ICC should contribute to peace. The fourth segment draws together the two strands of analysis to delineate the extent to which the ICC can contribute to peace. The final section summarizes and reaffirms the core theses.

2. The Capacity Question

The proposition that the ICC can contribute to peace requires a more nuanced understanding of the concept of peace. Framed in negative terms, peace refers to the cessation of mass violence. However, peace also has a 'positive' variant. Positive peace refers to the reestablishment of the society's institutional and normative infrastructure and the restoration of social cohesion.[12] The establishment of the rule of law and reconciliation, for instance, are indicative of positive peace. The analysis will proceed by exploring, in turn, the potential of the ICC to contribute to negative peace and positive peace.

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national_Criminal_Court_over_Mediterranean_migration_policy_-_as_more_die_at_sea

[12]   Johan Galtung, "Violence, Peace and Peace Research," *Journal of Peace Research* 6, no. 3 (1969): 167

2.1 Negative Peace

The delivery of in-conflict justice is becoming one of the defining characteristics of the ICC.[13] This is because the Court's temporal jurisdiction expands boundlessly into the future, enabling it to intervene where an international security problem is in its formative stages. The ICC's predisposition to intervene in active conflicts is demonstrated by the fact that the vast majority of the situations that the ICC has intervened in till date were situations of active conflict at the time of the Court's intervention.[14] The view that ICC interventions positively contribute to the achievement of negative peace relies on the arguments that international criminal trials prevent the exacerbation of conflicts, marginalize perpetrators, produce deterrence and catalyze peace negotiations.

Interventions by the ICC are claimed to have the potential to prevent situations of active conflict from exploding into crises of genocidal proportions. The threat of prosecution by the ICC is argued to contain and constrict human rights abuses, preventing escalation into mass atrocity, as illustrated in the case of Côte d'Ivoire. In Côte d'Ivoire, incendiary hate speech and xenophobia was channeled through government-controlled radio broadcasts, in order to further President Gbagbo's electoral ambitions. This led to outbreaks of violence against the ethnically non-Ivorian population.

As the violence continued to intensify, the United Nations Special Adviser on the Prevention of Genocide issued a statement warning that such incitement to violence could lead to an ICC referral. [15] The situation changed drastically with this threat of ICC prosecution against President Gbagbo, causing a termination of the broadcasts that had thus far fueled mob violence.[16] While one could certainly argue that no linear causality between the threat of ICC prosecution and the stabilization of the eruptive situation has been established, there is certainly a discernible causal mechanism linking the credible threat of ICC intervention and the attainment of negative peace.

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13 Philipp Kastner, *International Criminal Justice in bello? – The ICC between Law and Politics in Darfur and Northern Uganda* (Boston: Martinus Nijhoff, 2011), 14

14 "Situations under investigation", International Criminal Court, accessed 30 December 2018 https://www.icc-cpi.int/pages/situations.aspx

15 "United Nations, Statement by the Special Adviser on the Prevention of Genocide", Juan Méndez, accessed 15 April, 2019 http://www.un.org/News/dh/infocus/westafrica/mendez-15nov2004.htm

16 "Attacks on the Press 2004: Ivory Coast", Committee to Protect Journalists, accessed May 12, 2019 http://www.cpj.org/attacks04/africa04/ivory.html

The second contribution that the ICC can potentially make is through the domestic and international marginalization of its targets.[17] This view is premised on the assumption that domestic and international political actors will choose to dissociate from persons alleged to have committed atrocities. Marginalization of perpetrators isolates them from their allies, supporters and the wider international community, stripping them of the key resources for continuing to commit atrocities. This can cause the violence to subside. Marginalization also allows the exclusion of those who stand to benefit from continued conflict, who are 'spoilers' of the peace process.[18] Moreover, clearing the political arena through international criminal prosecutions allows the emergence of more moderate political leaders.

There are several challenges to the view that marginalization by the ICC contributes to negative peace. Targeting by the ICC may not result in isolation, as in the case of Sudanese President Omar Al-Bashir who visited ICC Member States despite the arrest warrants against him.[19] Secondly, marginalization does not necessarily remove potential 'spoilers' of the peace process as the political successors of the criminals may extend the reign of violence.[20] Moreover, ICC interventions have the potential to trigger retaliation by targets in the form of increased violence against civilians. Thus, Al-Bashir retaliated by forcing thirteen humanitarian aid agencies to withdraw from Sudan. The outcome of ICC targeting, therefore, is sometimes a cycle of mounting violence and barbarity.[21]

Nevertheless, in certain cases, marginalization has genuinely advanced the agenda for negative peace. The fate of the military group, the Lord's Resistance Army (LRA), following the ICC intervention in Uganda is an example. The LRA depended heavily on Sudanese support for its operation. One of the major

17 Errol Mendes, *Peace and Justice at the International Criminal Court – A Court of Last Resort* (Cheltenham, Edward Elgar Publishing Limited, 2010): 11-12

18 Alex de Waal and Gregory Stanton, "Should President Omar Al-Bashir of Sudan Be Charged and Arrested by the International Criminal Court? An Exchange of Views" *Genocide Studies and Prevention* 4, no.3 (2009): 329-338

19 Gwen Barnes, "The International Criminal Court's Ineffective Enforcement Mechanisms: The Indictment of President Omar Al Bashir" *Fordham International Law Journal* 32, no. 6 (2011):1584

20 Leslie Vinjamuri, "Deterrence, Democracy, and the Pursuit of International Justice" *Ethics & International Affairs* 2, no.2 (2010): 191-195

21 "Shame and Violence: Insight from Complex Emergencies" Alex de Waal, (*Social Science Research Council* , 9 June 2008) http://blogs.ssrc.org/sudan/2008/06/09/shame-and-violence/insight-from-complex-emergencies/

military advantages of the LRA over the Ugandan Army was the former's ability to operate from within Sudanese territory where the military had no reach. The situation was progressively deteriorating prior to the ICC referral by the Ugandan government.[22] However, the ICC's stigmatization of the LRA led to the Sudanese government's adoption of the March 2004 Protocol which allowed the Ugandan Army to destroy LRA military bases in Sudan. The International Crisis Group attributed this lapse of Khartoum's support for the LRA to the impact of the ICC.[23] Hence, on a balance, it is possible to conclude that under certain circumstances, marginalization can further the objectives of negative peace.

The third potential contribution is through deterrence. Deterrence may be specific, that is, aimed at the particular perpetrator of the international crime. Deterrence may also be general, intended to demonstrate to the world at large that international crimes will not be condoned.[24] This potential of ICC interventions is said to lie in the ability of the Court to effect changes in the cost-benefit calculus that informs decisions to pursue political or ideological ends through mass atrocity. However, deterrence in the sense that it is invoked for punishing breaches of domestic criminal law where crime is a social deviation, cannot be transposed into international criminal law where crime has morphed into a glorified social norm. These are societies where the obliteration of intended victims has been equated with a noble quest for "purification". The extent to which the threat of prosecution will factor into the cost-benefit calculus of committing mass atrocity is therefore highly dubious.

In addition, the deterrence argument is premised on the questionable assumption that perpetrators make rational choices.[25] Moreover, the indeterminacy of the relationship between ICC interventions and deterrence has been demonstrated by Broache in the context of the Democratic Republic of

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22 "Consolidated Appeals Process: Uganda 2004", UN Office for the Coordination of Humanitarian Affairs, accessed May 6, 2019 https://www.unicef.pt/18/humanitarian_appeal_2005_.pdf

23 "Shock Therapy for Northern Uganda's Peace Process", International Crisis Group, accessed June 2, 2019 http://www.crisisgroup.org/home/index.cfm?id=3366&I=1

24 Payam Akhavan, "Justice in The Hague, Peace in the Former Yugoslavia? A Commentary on the United Nations War Crimes Tribunal" *Human Rights Quarterly* 20, no.4 (1998): 737

25 Kate Cronin-Furman, "Managing Expectations: International Criminal Trials and the Prospects for Deterrence of Mass Atrocity" *The International Journal of Transitional Justice* 8, no.4 (2013): 434-439

Congo (DRC).[26] The issuance of the arrest warrant against Bosco Ntaganda did not affect the level of violence. The conviction of Thomas Lubanga produced a rise in the level of violence. Finally, Ntaganda's surrender was followed by a decline in violence. ICC actions, therefore, can produce disparate outcomes even in merely different phases of the same conflict.

Notwithstanding these complexities, evidence indicates that the Serbs and Hutus believed they could commit mass atrocity with impunity because the likes of Pol Pot, Idi Amin and Augusto Pinochet were not held to account.[27] Even the view that perpetrators of mass atrocity are not rational actors demands scrutiny. Internal violence is not the spontaneous implosion of primitive hatred but a strategic use of power within a meticulously organized plan.[28] Thus, there is political logic at its core, however perverse it may be, and a cost-benefit calculus which the ICC can alter in disfavor of committing mass atrocity.

Finally, it is also argued that the ICC can catalyze peace negotiations. The view is that the ICC's interventions can alter prevalent power dynamics, creating an environment conducive to peace negotiations. Uganda offers an illustration of this capacity.[29] The three-decade long war between the LRA and the Ugandan army was one Africa's longest and most violent wars. It was only with the referral of the situation to the ICC that a series of critical developments followed which initiated peace negotiations. Sudan severed its ties with the LRA, as explained above. The LRA was thus isolated and with increasing defections and growing costs of continuing the war, its survival was at stake.

The cumulative effect was that the LRA was driven to begin contemplating settling for peace. Moreover, the ICC's intervention also served to draw international attention to the plight of the Ugandan people.[30] Greater financial and political contributions helped to address humanitarian needs and advance

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26 Michael Broache, "Deterrent, Instigator or Irrelevant? The International Criminal Court and Atrocities in the Democratic Republic of Congo: A Case Study of the RCD-Goma" in *Justice in Conflict* ed, Mark Kersten, (Oxford, Oxford University Press, 2016): 46

27 Michael Scharf, "Jostling over Justice" *Foreign Policy* (2006): 6-7

28 Akhavan (n 1) 628

29 Nick Grono and Adam O' Brien, "Justice in Conflict? The ICC and Peace Processes" in *Courting Conflict, Justice, Peace and the ICC in Africa* ed, N. Waddell and others (London: Royal African Society, 2008) 13-20

30 "War in northern Uganda world's worst forgotten crisis", Agence France-Presse accessed April 30, 2019 http://reliefweb.int/report/uganda/war-northernuganda-worlds-worst-forgotten-crisis-un

peace negotiations. Although the peace talks were ultimately defeated, there is a crucial inference that can be drawn regarding the ICC's impact on peace negotiations. It was the ICC's intervention that compelled the LRA to approach negotiations for peace, and the intervention also led to the inflow of necessary resources for proceeding with the negotiations.

ICC interventions can thus have differential impacts on situations of active conflict. Hence, it must also be asked whether the ICC has the operational capacity to act in consideration of the likely effects of its actions (or inactions) on the attainment of negative peace. Where ICC interventions are likely to contribute to the achievement of negative peace, the positive effects can potentially flow directly from the activation of the ICC's jurisdiction or even the mere fact that the ICC can potentially exercise jurisdiction as in the case of Côte d'Ivoire.

The situation is more complex where the objectives of negative peace are better served by the ICC's refusal to intervene. However, by virtue of Art.53 of the Rome Statute, the ICC can potentially take account of its impact on peace in determining whether to proceed in a situation. The decision to commence investigations is preceded by a preliminary examination of the situation. Art.53 requires the Prosecutor to take into consideration the 'interests of justice' in this examination. It is a countervailing consideration that allows the ICC to not undertake investigations where this would serve the 'interests of justice'. This includes an examination of the interests of victims.[31]

The Office of the Prosecutor (OTP) has interpreted this provision as means of engaging local communities in the justice process.[32]   There are many champions and critics of this approach, but for present purposes, it is important to note that the OTP will use Art.53 only exceptionally, given that the OTP has inferred a statutory presumption in favor of investigation.[33] Nevertheless, there is a potential for the OTP's approach to be modified to allow systematic and beneficial engagement with the impact of the workings of the ICC on the broader peace processes in different national contexts.

There is thus a wide constellation of relevant factors drawn from the particularities of contexts that ultimately shape the ICC's ability to contribute to negative peace in a given context. Institutionalized understandings of the ICC's appropriate role determine the Court's willingness to realize these potentials.

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31 Rome Statute (n 5) art.53(1)(c)

32 Policy Paper (n 8) para.6

33 Ibid para.3

2.2 Positive Peace

The ICC is also argued to have the potential to further the aim of achieving positive peace.[34] Proponents of this view argue that ICC interventions effectuate a symbolic break from the past, end impunity, catalyze the establishment of the rule of law and contribute to the impetus for reconciliation. The first proposition is that holding to account those most responsible for atrocities at the ICC offers closure to victims and the wider society. A transition may only be impressed in the collective consciousness with the punishment of those at the apex of the oppressive regime or who led the brutal resistive movement. There is thus an integral contribution of justice, in itself, to the commencement of the positive peace process.

However, the ICC's capacity to make such contribution has some constraints. This is because the ICC applies high standards of human rights protection for defendants, compared to many domestic legal systems, and as such, the local community may perceive trial at The Hague as less of a punishment and more of a privilege. In the context of Libya, for instance, both the Gaddafi and the Al-Senussi Defences sought proceedings before the ICC rather than at national courts. The absence of the death penalty in ICC's sentencing appears to have been a prime consideration in determining their preference.[35] Hence, in the eyes of victim communities, the ICC's retributive justice may not be sufficiently retributive to constitute justice.

The ICC's capacity to prevent recurrences of violence is premised on the view that ending impunity is vital to the maintenance of peace. Thus, ensuring accountability is necessary for the preservation of social morality and the establishment of sustainable peace. This is due to the fact that failure to seek account for abuses festers a dangerous culture of impunity which only encourages future abuses domestically and emboldens potential perpetrators elsewhere.[36] Ending impunity is central to the ICC's mandate.[37]

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34 Obiora Okafor and Uchechukwu Ngwaba, "The International Criminal Court as a "Transitional Justice" Mechanism in Africa: Some Reflections" *International Journal of Transitional Justice* 9 (2015): 90-91

35 Carsten Stahn, "Justice Civilisatrice?" in *Contested Justice* ed, C De Vos and others, (Cambridge: Cambridge University Press, 2015): 46-84

36 Richard Goldstone, "Justice as a Tool for Peace-Making: Truth Commissions and International Criminal Tribunals" *New York University Journal of International Law and Politics* 28 (1996): 485-490

37 "Statement to the United Nations Security Council on the Situation in Darfur, the Sudan, Pursuant to UNSCR 1593", Fatou Bensouda, accessed April 17, 2019 http://www.icc-cpi.int/iccdocs/otp/ICC-OTP-UNSC-Darfur-ST-05June2013-ENG.PDF

It is further argued that ICC prosecutions have a general deterrent effect on potential international criminals. This deterrence results from the risk of prosecution and subsequent punishment, which, when factored into the strategic calculations of those inclined towards the commission of such crimes, can sway them otherwise. Empirically establishing this effect, however, is challenging.[38] While it is clear whom trials have failed to deter, there can be no conclusive evidence on those who were deterred.

Nevertheless, there is some anecdotal evidence in support of the conclusion that ICC interventions have a general deterrent effect.[39] The impact of the ICC's intervention in the DRC offers valuable insight on this point. The ICC issued an arrest warrant for Thomas Lubanga, who was the founder of the military group, the Congolese Patriots, and a central actor in the Ituri conflict. The charge was the conscription of child soldiers. The series of incidents that followed from the issuance of the warrant illustrate the ICC's potential for deterrence. There was mounting fear among leaders of the Congolese army and a growing desire to understand what conduct constituted war crimes.[40] Lubanga's arrest increased awareness among the army and the rebels that the use of children as soldiers constituted a war crime and that it could lead to prosecution by the ICC. This caused a decline in the number of child soldiers recruited by 8% per year following the warrant.[41] Furthermore, a spill-over effect was observed in the Central African Republic (CAR). Rebels in the CAR, upon learning that the conscription of child soldiers was a war crime, sought to be excused on account of their previous unawareness, and they committed to demobilize their child soldiers, a commitment they went on to fulfil.[42]

The potency of deterrence depends, of course, on the probability of prosecution following from an infraction. The weaknesses of the enforcement mechanisms available to the ICC thus severely curtail the deterrence it can produce.[43]However, generally, the ICC is likely to produce some measure of deterrence against the commission of international crimes.

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38 Helena Cobban, "Think Again: International Courts" *Foreign Policy* (2006): 1

39 "Selling Justice Short: Why Accountability Matters for Peace" Human Rights Watch, accessed May 13, 2019 https://www.hrw.org/report/2009/07/07/sellingjustice-short/why-accountability-matters-peace

40 Ibid 123

41 "UNSC Report of the Secretary General: The rule of law and transitional justice in conflict and post-conflict societies", UNSC, August 23, 2004 UN Doc S/2004/616

42 Ibid

43 Barnes (n 19)

The third possible contribution of the ICC to the furtherance of positive peace lies in its capacity to catalyze the establishment of the rule of law. Ensuring criminal accountability is one facet of the ICC's overarching aim of strengthening the rule of law and the domestic legal system in the post-conflict environment. Ensuring the rule of law secures justice, stability and individual freedom. Indeed, peace itself has been defined in terms of government by the rule of law.[44]

The mandate of the ICC is based on the principle of complementarity.[45] This means that it complements national courts, and this is with a view to strengthening the rule of law in the domestic system. Thus, the ICC intervenes where the constitutional order has collapsed and cannot support the standards required for the prosecution of serious crimes. The ICC promotes international legal standards and mobilizes capacity-building of the domestic justice system.

This role of the ICC is illustrated by the Ugandan context. Fundamental reforms to the Ugandan criminal code followed from the ICC's intervention. The Rome Statute was incorporated into domestic law by the International Criminal Court Act 2010, empowering domestic courts to try international crimes.[46] This was a milestone in the domestic observance of international criminal law. Furthermore, the ICC's role facilitated the establishment of an 'International Crimes Division' in the Ugandan High Court, modeled on the ICC, and it is empowered to hear cases on the most serious crimes. The Division is a regarded as a testament to the commitment to end impunity for atrocity and a significant advance towards achieving that end.

Finally, it is also argued that the Court contributes to reconciliation. One of the distinctive features of international criminal justice is that it individualizes guilt, rather than recognizing collective responsibility for atrocities.[47] It is argued that the recognition of collective guilt reinforces social divides, making reconciliation more elusive. Thus, it is claimed that the individualization of guilt allows vengeful sentiments to be peacefully expelled through retributive justice for those most responsible, so that the process of social repair can begin.

However, the individualization of guilt potentially reduces mass atrocities to

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44 Sarah Nouwen, "The ICC's Intervention in Uganda: Which Rule of Law Does it Promote?" *Legal Studies Research Paper Series University of Cambridge* 22 (2012): 4

45 Rome Statute (n 5)

46 Nouwen (n 44)

47 Gerry Simpson, *Law, War and Crime – War Crimes Trials and the Reinvention of International Law* (Cambridge: Polity Press, 2007), 54

a "wilderness of single instances"[48], constructing an artificial narrative that is oblivious to the social nature of the wrongs. This is because the ICC's judicial process centers on the determination of individual criminal responsibility. Structural causes of violence remain unexamined. Retribution against the individual is prioritized over the identification and confrontation of systemic causes of conflict. The danger this poses to reconciliation is the fact that it 'may contribute to a myth of collective innocence'[49] which would contrast harshly with the actual experience of the local community.

Based on the above discussion, the ICC's potential contributions to positive peace appear to flow naturally from the inherent nature of its justice. There seems to be little scope for the ICC to control its effects on the different facets of positive peace. However, with the evolution of the concept of complementarity, the role of the ICC has expanded to include actively developing the capacity of domestic justice systems. This notion of 'positive' complementarity[50] emphasizes a role for the ICC in contributing to the development of efficacious national institutions.[51] The fact that the ICC positions itself as the nucleus of the international criminal justice system while requiring domestic courts to gravitate towards its design is evidenced in the requirement in admissibility challenges that State actions substantially replicate those of the ICC.[52] Moreover, the Court actively reinforces its normative capacity through its emphasis on specific agendas and promulgation of policies.

Based on the foregoing analysis, the question of whether the ICC can contribute to peace cannot be answered in the abstract. The ICC will not necessarily further peace processes nor will it invariably pose an obstacle. The critical question is whether the Court should actively shape its work to facilitate the achievement of peace, within the given parameters of its institutional capacity. Thus, the next segment of the analysis considers whether the ICC should contribute to peace.

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48 Anne Leebaw, "The Irreconcilable Goals of Transitional Justice" *Human Rights Quarterly* 30, no.1 (2008): 95-104

49 Laurel Fletcher and Harvey Weinstein, "Violence and Social Repair: Rethinking the Contribution of Justice to Reconciliation" *Human Rights Quarterly* 24 (2002): 573-580

50 William Burke-White, "Proactive Complementarity: The International Criminal Court and National Courts in the Rome System of International Justice" *Harvard International Law Journal* (2008): 49-53

51 "Paper on some policy issues before the Office of the Prosecutor", ICC OTP, accessed June 8, 2019 https://www.icc-cpi.int/nr/rdonlyres/1fa7c4c6-de5f-42b7-8b25-60aa962ed8b6/143594/030905_policy_paper.pdf

52 *Prosecutor v Gaddafi and Al Senussi* (Judgment) ICC-01/11-01/11 (21 May 2014) para.73

3. The Propriety Question

The ICC's discourse espouses pure legalism according to which the ICC is solely a court of law. From this legalistic perspective, there must be a complete severance of law from politics.[53] Hence, based on this view, the ICC should not engage itself with the politics of peace. To the extent that peace is facilitated by holding to account those most responsible for international crimes, the court may passively contribute to peace, but it cannot take it upon itself to serve this purpose.

The analysis begins by challenging this dogmatic insistence that the ICC's work concerns only law and excludes all politics. Following from the basic premise that the ICC is a political actor at both the international and domestic levels, any answer to the question of propriety is premised on a particular understanding of the purpose of the ICC. The analysis of whether the ICC should contribute to peace, therefore, turns to an exploration of the authority behind the ICC's actions and the interests that the ICC aims to serve.

It is evident on the face of the Rome Statute that the ICC is not exclusively a court of law. Not only does the ICC have an exceptionally broad mandate, the design of its nexus with conflict-affected societies distinguishes it from all other courts.[54] Thus, the ICC provides avenue for victims' participation and is empowered to order reparations. The ICC has numerous inlets for extra-judicial, contextual considerations to influence its workings. Its permeability in terms of inclusiveness, its determinations of admissibility and its evolutive interpretation of 'interests of justice' are all instances of the ICC's expression of its alternate identity as an active political entity in the domestic context.[55] The ICC is also an actor in global politics, be it by acting upon referrals that effectively render justice against only certain parties to the conflict or by acting upon United Nations Security Council (UNSC) referrals. Therefore, the ICC is far from being an apolitical creature. It is an actor in both international and domestic politics. Whether the ICC should contribute to peace must then be answered by identifying the force that drives ICC politics.

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53 Judith Shklar, *Legalism: Law, Morals, and Political Trials* (Massachusetts, Harvard University Press 1964)

54 'Victims Before the International Criminal Court: A Guide for the Participation of Victims in the Proceedings of the Court', ICC-CPI, accessed June 5, 2019 https://www.icc-cpi.int/NR/rdonlyres/8FF91A2C-5274-4DCB-9CCE-37273C5E9AB4/282477/160910VPRSBookletEnglish.pdf

55 Florian Jessberger and Julia Geneuss, "The Many Faces of the International Criminal Court" *Journal of International Criminal Justice* 10, (2012): 1081

In one view, the ICC serves the purposes of international justice. The ICC is thus projected as the embodiment of 'justice' itself. However, as lofty an ideal as justice is, it does not of itself supply operative principles or prescribe how the idea is to be actualized. Similarly, a condemnation of the abstract idea of 'affronts to humanity' does not materialize into a justification for the ICC as an entity or for its actions in a given context.[56] An alternative view is that international criminal justice is served by and for the benefit of the international community. However, this claim is untenable given that the ICC is not a universal court at present, and universal membership is at best part of a distant future. Therefore, it can only be said to serve its Member States, which certainly cannot be equated with the international community.

It may be argued that the ICC serves the collective ends of its Member States as a form of juridified diplomacy.[57] The Assembly of State Parties (ASP) certainly exercises a significant measure of control over the Court.[58] However, despite its obvious strengths, this argument also has a number of serious weaknesses. The resistance faced by the ICC from among its Member States cannot easily be explained. Also given that the ASP's role is limited to administrative oversight, and that Member States vary considerably in their vision of how the Court should operate, the argument that the ICC is run by and for its Member States is unsupportable.

Another potent account of the Court's role is that it serves the societies in which it intervenes. This view features prominently in the ICC's own discourse. Hence, the ICC Prosecutor has referred to victims as being the Court's sole raison d'être.[59] This account views the ICC as essentially a transitional justice mechanism. However, this image of victims as constituting a homogenous category, united in their demands for ICC justice, cannot be sustained where constituents of this group call into question the Court's actions. This was the case in Uganda where the ICC's exclusive focus on the LRA translated into a view that the ICC was a representative of the State, given that the Ugandan

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56 Adam Branch, "International Justice, Local Injustice" *Dissent* 51, (2004): 22

57 Sara Kendall, "Commodifying Global Justice: Economies of Accountability in the International Criminal Court" *Journal of International Criminal Justice* 13, (2015): 113

58 Frédéric Mégret, "In whose name?" in *Contested Justice* ed, C. De Vos and others (Cambridge, Cambridge University Press, 2015): 23-45

59 Sarah Kendall and Sarah Nouwen, "Representational Practices at the International Criminal Court: The Gap Between Juridified and Abstract Victimhood" *Law and Contemporary Problems* 76, (2014): 235-239

Army had also committed atrocities but was not held to account.[60] Indeed, the most perilous challenges to the ICC's legitimacy come from victims when they challenge the merit of the ICC's claim of representation given that the Court does not genuinely rely on its engagement with victims to inform its decisions.

Therefore, it is evident that the ICC's work cannot tenably be grounded on vague abstractions like "humanity" or "justice", nor is the Court simply an international adjudicatory service working at the behest of its patrons. Viewing it as the vanguard of the victim's right to justice is also not without its complexities. The ICC has alternately invoked each of these symbolic powers to justify its actions. In every context, one or more of these constituencies has served as a repository of legitimacy for the ICC to draw from. The authority the ICC relies on in a given context is the resultant of countervailing intrinsic and extrinsic vectors. Thus, the ICC deliberately and strategically vacillates between different conceptions of the sovereign that it serves. Ultimately, this evinces the reality of the Court as the architect of its own destiny. The ICC therefore is an agent pursuing its own ends.

However, to argue that the ICC acts in its own interests is not to assert that its actions are directly driven by a Darwinian will for survival and propagation. The narrow institutional interests of the ICC certainly play a foundational role in determining the Court's actions. However, the differential conceptions of the purpose of the ICC explored above are partially accurate in that they collectively constitute the external environment to which the ICC must adapt and respond, if its institutional vision is to be realized. Thus, while none of those factors is the sole determinant of how the ICC functions, they are all integrated into the ICC's calculus of self-interest.

Since its inception, the ICC has adapted its work to further its interests.[61] Its institutional insecurity caused its adoption of an initial strategy of caution.[62] To the extent that the ICC is indeed now a "permanent institutional fixture",[63] it appears to aim for the enhancement of its legitimacy so as to further entrench its position in the global order and to expand towards universality. The

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60 Mégret (n 58)

61 Antonio Franceschet, "Four Cosmopolitan Projects: The International Criminal Court in Context" in *Governance, Order and the International Criminal Court – Between Realpolitik and a Cosmopolitan Court* ed, Steven Roach (Oxford, Oxford University Press, 2009), 179-204

62 Benjamin Schiff, *Building the International Criminal Court* (Cambridge, Cambridge University Press, 2008), 225

63 Payam Akhavan, "The Rise, and Fall, and Rise of International Criminal Justice" *Journal of International Criminal Justice* 11, (2013): 527-528

legitimacy of the ICC is not externally endowed upon it but must be generated by the Court itself through its choices and strategies. It must deliberately act to legitimize its actions. Also, the ICC perceives and projects itself as destined for eventual universality as is amply illustrated in the literature.[64] However, this institutional vision can only be realized if the Court incrementally builds its legitimacy. Based on this understanding of the ICC's priorities, it is possible to delineate the extent to which the ICC should contribute to negative and positive peace.

4. The Question Of Extent

In view of the overarching objectives of the ICC, its contribution to both negative and positive peace, to an extent, is essential, as is elaborated in this segment of the analysis.

4.1 Negative Peace

The appraisal of the ICC's capacity to contribute to negative peace has demonstrated that the ICC, through its actions and inactions, can accelerate conflict resolution or cause its retrogression. In situations of active conflict, there is now a growing recognition that responses to conflict must be localized, engaging with contexts more responsively.[65] The utility of ICC justice is thus widely evaluated on the basis of the immediate results it produces in the situations where its jurisdiction is triggered.

In view of this increasing focus on 'the local', the legitimacy of the ICC depends on the Court's ability to engage with local communities and serve context-sensitive justice. Merely invoking 'independence' and 'impartiality' are inadequate to establish the legitimacy of the Court. Thus, there is a need for greater responsiveness to context in the work of the ICC. However, while 'local ownership' is an admirable aspiration,[66] it is somewhat unrealistic for the Court. Responsiveness and sensitivity to the socio-political reality of local contexts offers a more attainable goal. The ICC must achieve a balance between the preservation of its integrity as a court of law and the recognition of its impact as a political actor.

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64 "A Universal Court with Global Support", Coalition for the International Criminal Court, accessed May 16 2019 www.iccnow.org/?mod=universalcourt

65 Mégret (n 58)

66 "Outreach Report 2009", ICC Public Information and Documentation, accessed April 11, 2019 https://www.icc-cpi.int/iccdocs/PIDS/publications/OUR2009Eng.pdf

The effects of ICC actions interact with a plethora of relevant factors in conflict settlings and there are complex causal pathways between the ICC act in question and an observed increase or decrease in violence. For the ICC to be more responsive to context there is a need for a more nuanced analysis of how the ICC affects peace. Here, peace is to be understood not as a static state but as a dynamic process. In fact, a peaceful settlement constitutes three main stages which are pre-negotiation, negotiation and post-negotiation.[67] The progress or regress of the peace process can be affected in a multitude of ways by the nature and timing of the ICC intervention and the local dynamics of the stage at which the Court intervenes.

While it is not possible to prospectively prescribe how the ICC should conduct itself in a given conflict situation, there are certain key considerations that the ICC must apply. The core point is that its decision-making process should not be informed by solely legalistic criteria but also by the broader context of the conflict. Considerations that are extraneous to the evaluation of individual criminal responsibility should inform prosecutorial discretion. However, this must not impinge on the integrity of the ICC as a court of law.

To the extent that a court of law is concerned with the application of formal legal criteria, an expansive approach to the 'interests of justice' does not make the work of the prosecutor more uncertain than it is by its very nature. Thus, the prosecutorial discretion under Art.53(1) has a vital role to play in situations where an ICC intervention has a manifest potential to aggravate or prolong the conflict.

Functioning purely as a court of law may cause the ICC to gravely offend local conceptions of what is just. This is illustrated by the ICC intervention in Uganda which focused on the crimes of LRA insurgents but not those of the Ugandan army, due to the temporal limits of the referral, resulting in an instance of one-sided justice. In such situations of slanted self-referrals, one may argue that the Court should decline to accept jurisdiction or, alternatively, that such situations demand analysis under positive complementarity.[68]

Contextual sensitivity further demands that determinations as to whether the Court should intervene in response to a referral should not be 'closed', legalistic processes. The scope for inclusivity in the ICC must be expanded

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67 Kristine Höglund, *Peace Negotiations in the Shadow of Violence* (Boston: Martinus Nijhoff 2008)

68 William Schabas, "First Prosecutions at the International Criminal Court" *Human Rights Law Journal* 27, (2006): 25-31

from merely participation at trial stage or design of reparation schemes to allow local insight at the earliest stages in the process of ICC interventions. Allowing local perspectives and demands to inform the preliminary examination, investigations and the structuring of the case is essential to overcome the rift between ICC justice and local justice.

4.2 Positive Peace

The ICC has a necessary impact on positive peace processes, and as such, it must consciously shape this impact to further its objectives. The Court's present state of denial as to its influence is posing a threat to its legitimacy. Moreover, this threat is not merely theoretical as is demonstrated by the recent withdrawal of Burundi from the Rome Statute,[69] and the "collective withdrawal" strategy being designed by African State-Parties, led by the African Union (AU).[70]

In order to determine how the ICC should shape its contribution to positive peace, it is first necessary to appreciate the nature of the challenges being mounted against it. It must be noted at the outset that some of the consequences of the ICC's role are intrinsic to the very nature of international criminal justice and therefore, may not be controllable. However, there is growing disenchantment with international criminal justice and this must be reversed by the ICC.

Much of the hostility towards the ICC emanates from a perception of international law as a neo-colonial project of the Western world, which resonates deeply with the third world's shared history of subjugation.[71] Given that 10 of the 11 situations the ICC has intervened in were in Africa, there may seem to be merit to the critique on the basis of selectivity alone.[72] However, several of these interventions resulted from self-referrals and thus, selectivity is a relatively reductionist critique. The present challenges to the ICC are far more complex.

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69 "Depositary Notification, Rome Statute of the International Criminal Court: Burundi: Withdrawal", UN Secretary-General, last modified October 27, 2016 <http://treaties.un.org/doc/Publication/CN/2016/CN.805.2016-Eng.pdf

70 "Withdrawal Strategy Document", African Union, last modified January 12, 2017 <http://www.hrw.org/sites/default/files/supporting_resources/icc_withdrawal_strategy_jan._2017.pdf

71 Siegmar Schmidt, "Soft Power or Neo-colonialist Power?" *Review of European Studies* 4, no.3 (2012): 100-105

72 Edwin Bikundo, "The International Criminal Court and Africa: Exemplary Justice" *Law and Critique* 23, no.1 (2012): 21-23

There are two major strands to this problem. The first problem concerns the argument of neo-colonialism manifesting in the ICC's contribution to post-conflict rule of law. Secondly, the ICC's impact on reconciliation efforts also requires reshaping. The ICC's contribution to positive peace through its establishment and institutionalization of the rule of law has been the basis for critiques grounded in the Third World Approaches to International Law (TWAIL). The ascription of a capacity-building role to the ICC in domestic justice systems is undeniably patronizing. The ICC is thus often perceived as an instrument of Western domination. From this perspective, the ICC masquerades as an independent court but in fact, it is merely an entrepreneur of cosmopolitan justice.[73]

While the ICC does not employ civilizing discourse, it does exert a self-centric gravity in its sites of intervention. The Rome Statute is framed to accommodate legal diversity and evades drawing hierarchies between ICC justice and domestic justice. However, in its prioritization of accountability and legal justice in the mandate of the ICC, the Statute effectively marginalizes alternative responses to atrocity. The complementarity regime is often criticized on the basis that it effectively requires ICC-centric replication at the domestic level. Mounting a successful challenge to admissibility before the ICC requires States to essentially imitate ICC proceedings.[74]

As observed above, there is a rising tide in international affairs that is shifting focus from 'the international' to 'the local'. This strengthens critiques of the ICC as a paternalistic entrepreneur of international norms, stifling local voices and imposing de-contextualized justice that is tantamount to local injustice. However, the ICC's engagement with 'the local' requires more development and refinement if it is to replenish the ICC's declining legitimacy.[75]

Assimilating the local perspective into the work of the ICC requires fundamental changes to the Court's present framework of operation. The ICC's current approach runs counter to its need to empower domestic jurisdictions. The model forces States to compete with the ICC. Societies are denied an indigenous process of trial and error that allows the organic evolution of domestic jurisprudence. Lasting stability and sustainable peace

73 Geoffrey Gordon, "The Innate Cosmopolitan Tradition in International Law" *Cambridge Journal of International and Comparative Law* 2, (2013): 906

74 Rod Rastan, "What is a "Case" for the Purpose of the Rome Statute?" *Criminal Law Forum* 19 (2008): 435

75 Dustin Sharp, "Addressing Dilemmas of the Global and the Local in Transitional Justice" *Emory International Law Review* 29, (2014): 71-73

depend on incremental change. While the ICC system does not prescribe self-centric transformation for domestic jurisdictions, there is an undeniable pressure towards conformity in the way the Court exercises its normative capacity. Indeed, Uganda's International Crimes Division may, in fact, be no more than a theatrical ensemble intended for the international audience, given that it has heard only one 'core crime' case, the Kwoyelo case, and even that was mired in controversy.[76]

Therefore, the ICC should instead foster a system of active cooperation with domestic jurisdictions, and with domestic justice processes more broadly. The Art.53 "interests of justice" and the potential contribution it can make to the determination of admissibility is an avenue for adopting such changes. As observed by the OTP, Art.53's conception of 'justice' is more expansive than 'criminal justice'.[77] The ICC's approach to Art.53 should be changed to establish a mechanism wherein there is a formal articulation of the circumstances under which deference would be accorded to traditional forms of justice. Domestic prosecutors and the ICC should furthermore undertake independent evaluations of the "interests of justice".

Thus, the ICC's determination of whether to proceed with prosecutions or not should be formally communicated and should explicitly state the rationale. The ICC should highlight interactions between international justice and traditional justice, the respective interests they protect, and do not protect, encouraging societal reflection. In situations where the ICC overrides local priorities and preferences, such decisions must be fully reasoned and communicated. Moreover, such explanations must be grounded in local knowledge, expertise and experience, and not merely an imposition of 'the international'. The ICC's capacity to uphold pluralistic legal traditions can similarly be realized through a more expansive interpretation of 'positive complementary' which allows the disparities between international and local standards and practices to be resolved through the activation of cooperative synergies.

The ICC's impact on reconciliation also requires more critical examination. The ICC's individualization of culpability entrenches the view of the conflict as mono-causal, emboldening narratives of 'good' versus 'evil'.[78] This projected convergence of all responsibility for atrocities in particular individuals conceals the wider network of responsible actors and structures.[79] ICC interventions

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76 Stahn (n 35) 73

77 Policy Paper (n 8)

78 Simpson (n 47) 157

79 Adam Branch, *Displacing Human Rights – War and Intervention in Northern Uganda* (Ox-

signify that indicted individuals are responsible for the conflict, that they are in a sense, the very causes of the conflict. Consequently, the socio-economic dynamics of the conflict are forced beyond the field of vision.[80]

This de-contextualization of conflicts reduces, or at least catalyzes the reduction of, complex socio-economic realities to a simplistic statement of linear causality between the perpetrator and the violent conflict. Thus, the ICC narrative arches over local understandings of the conflict, concealing inequalities and implicitly endorsing certain forms of injustice. The omission of structural violence from the ICC's discourse shapes domestic choices in the process of social repair.

In view of these critiques of the ICC's current impact on positive peace, it must be acknowledged that, to a certain extent, international criminal justice is intrinsically disempowering and paternalistic. However, these challenges may be met more constructively through a systematic engagement with 'the local'. The focus of ICC interventions is necessarily narrow and short-term, and therefore, it may not be possible to fully grapple with the historical intricacies or social complexities of the conflict. There is nevertheless a need for greater inclusion of and engagement with "the local" in the work of the ICC. As observed in the discussion on the Court's capacity, the ICC can exert control over its impact on positive peace through its approach to admissibility challenges and the specific agendas and policies it promulgates.

Essentially, the Court must assume a communicative role, delineating the extent to which its intervention can contribute to the achievement of the society's broader transformative goals, and acknowledge the limits of ICC justice that are apt to cause discontent. There must be greater recognition of possible detriment produced by ICC interventions. The potential for upholding pluralistic legal traditions through a more expansive interpretation of Art.53 and the concept of 'positive complementarity' must be realized. Structural injustices and inequalities must be acknowledged in ICC agendas and policies, contributing to the local impetus for change.

5. Conclusion

The role of the ICC in conflict resolution and peace-building has evolved considerably, well beyond the original design of its architects. While conceived

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ford, Oxford University Press 2011)

80 Ibid

as the end of the reign of impunity, the ICC has emerged as more than solely a powerful bulwark against international crimes. The Court has emerged as a potent political actor, capable of driving conflict resolution and shaping positive peace. However, the Court's passivity towards its inevitable engagement with the politics of peace is inimical to its legitimacy and long-term ambitions as a universal court. The ICC must, therefore, assert itself politically, even if it is only to distinguish itself from prevalent global and local politics. The ICC must exercise its agency and steer its own course, overcoming the temptation towards passivity and not yielding to attempts of instrumentalization.

The establishment of the ICC, and the international criminal justice enterprise more broadly, is a great advancement in the moral evolution of humankind. However, success is never absolute, moral triumphs are impermanent and the ICC is not infallible. The existential threats to the Court are as potent as ever. The ICC cannot stand at the peripheries of conflicts as the border-control at the divide between criminality and politics. This divide is actively constructed by the Court through decisions as to when 'the political' becomes 'the criminal', and where this divide is drawn, the Court becomes a potent normative force for change. To realize the ICC's institutional vision, through the entrenchment of its place in the global order and the expansion of its scope from internationality to universality, the Court of law must also become a Court for peace.

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The Dream of the Buddhist-Burmese Nation-State: No Place for the Rohingya Community

Nahian Salsabeel[1]

Abstract

Ethno-religious tensions and sectarian violence has made up a key characteristic in Myanmar ever since its independence. One of the gravest conflicts in the country is, no doubt, the inhumanity directed towards those titled the "most persecuted minority", i.e. the Muslim Rohingya minority by the dominant Buddhist Rakhines. While historically the violence against the Rohingya minority has been driven because of a variety of reasons by name, the policy followed by the Myanmar government against the people has been to some extent consistent in nature. This paper will focus on the link of Buddhist-Burmese nationalism and the influx of Rohingya refugees all over the world. It will also look at the past historical experiences of oppression against the Rohingya ethnic community, as well as record the 'Burmanization' efforts of Myanmar.

Introduction

The Rohingyas have been titled as the "most persecuted minority" and for good reason. Inhumanity directed towards the Muslim Rohingya minority by the dominant Buddhist Rakhines is a key issue covered when talking about violation of human rights and degradation in whatever context. Historical exclusion and abuse of rights have been an omnipresent aspect throughout

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the lives of several generations of Rohingya people. Apart from that, the Myanmar military has been known to play an oppressive role against the Rohingya people as well. Over the passage of time the people belonging to this repressed minority have had to find refuge in other states due to fear of life and extreme abuse of human rights. The latest persecution of the Rohingya people carried out starting from 25th August, 2017, lasting for months, has grabbed international attention, and the United Nations has declared the actions taken against the Rohingya ethnic community by the Myanmar military, under the directives of Myanmar government, to be "textbook example of ethnic cleansing"[2]. Having had started from the pre-colonial times, the oppressive nature of Buddhist-Burmese jingoism has been one of the core reasons driving the brutality against the Muslim minority. The goal is Burmanization of the country, and ousting the Rohingya, a community that is racially, linguistically and religiously different from the rest of the ethnic communities of the state, is a prime requirement to achieve this goal.

This paper will focus on the link of Buddhist-Burmese nationalism and the influx of Rohingya refugees all over the world. It will also look at the past historical experiences of oppression against the Rohingya ethnic community, as well as record the 'Burmanization' efforts of Myanmar, driven by its national feeling and aspiration to establish a Buddhist-Burmese nation-state. The paper has been divided into namely six parts: the first deals with the definition of jingoism, the second with the controversial issue of whether Rohingyas are refugees or not, the historical implications of oppression against the minority followed by the recent developments, and then the attempts of Burmanization of the country and then a concluding section. It will employ secondary research methodology, reviewing and analyzing past scholarly papers on the issue, as well as newspaper articles, journals, books and other multimedia contents.

Definition of Jingoism

Historically, in the context of the Rohingya community, it is observed that a single consistent policy has been pursued by the Myanmar government, backed by the Buddhist majority. But this has not been an only case— one of the initial controversies after the independence of Burma in 1948 was surrounding that whether it should be a Buddhist-Burmese nation-state. While having been a strong, argument proposed in the past, its actualization in the present has been synonymous to the frame of the concept of chauvinism.

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[2] "Is Refugee Crisis 'Textbook Ethnic Cleansing'?". *BBC News*, accessed April 1, 2019 https://www.bbc.com/news/world-asia-41566561.

Jingoism has been defined as "excessive and unreasonable patriotism"[3]. This also includes feeling of partiality and attachment to a nation or a race, which has time and again led groups to pursue destructive tendencies[4]. This kind of aggressive inclinations were initially, and in the most prominent manner, displayed by Napoleon. Another prominent instance has been observed by Hitler and the Germanic Nazi ideologies spread during the Second World War period.

Rohingya: Refugee by Definition?

There have been a lot of controversy regarding should Rohingya people who have fled Myanmar be called 'refugees' or not. Bangladesh has been reluctant to entitle the Rohingya people who have sheltered in Cox Bazaar and Teknaf areas since 2012. As a matter of fact, on several occasions it has denied to grant the Rohingya refugee status even after repeated requests by UNHCR[5].

The 1984 Latin-American Cartagena Declaration on Refugees defines refugees as[6]:

"persons who have fled their country because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, massive violation of human rights or other circumstances which have seriously disturbed public order."

The Organization of African Unity's 1969 Convention on Refugee Problems in Africa namely the African Convention defines[7]:

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[3] Richard Routley, and Val Routley, *Against The Inevitability Of Human Chauvinism*. (Notre Dame, England: University of Notre Dame, 1979), https://iseethics.files.wordpress.com/2013/02/routley-richard-and-val-against-the-inevitability-of-human-chauvinism.pdf.

[4] "Chauvinism", Encyclopedia Britannica, accessed April 1, 2019. https://www.britannica.com/topic/chauvinism.

[5] "Bangladesh Govt Reluctant To Grant Refugee Status To Rohingya", Dhaka Tribune, accessed April 1, 2019, https://www.dhakatribune.com/bangladesh/2017/09/26/bangladesh-govt-reluctant-grant-refugee-status-rohingya/.

[6] *Cartagena Declaration On Refugees* (Mexico & Panama: Colloquium on the International Protection of Refugees in Central America, 1984), https://www.oas.org/dil/1984_cartagena_declaration_on_refugees.pdf.

[7] Sultana Yesmin. "Policy Towards Rohingya Refugees: A Comparative Analysis Of Bangladesh, Malaysia And Thailand". *Journal Of The Asiatic Society Of Bangladesh* 61, no. 1 (2016): 71-100.

"Every person who, owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part of the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality

The continued exponential growth of number of displaced persons seeking international refuge has resulted into increased attention directed towards the concept of refugees, the criteria of refugees and the international refugee law, and has, hence, received increased importance of global human rights mechanism. The only international legal criteria that provides the legal definition of refugees is the 1951 UN Convention Relating to the Status of Refugees (Geneva Convention) and the 1967 Protocol Relating to the Status of Refugees. The outlines of a refugee are believed to be as follows, as stated by the Geneva Convention after the 1967 Protocol[8]:

"owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it."

In simpler terms, a refugee can be entitled to be so once he or she satisfies the criteria which is within the definition of the Convention of 1951[9]:

1. Well-founded fear of persecution
2. For reasons of race, religion, nationality, membership of a particular social group, or political opinion
3. Is outside the country of his nationality
4. Is unable or, owing to such fear, is unwilling to avail himself of the protection of that country
5. Not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.

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[8] *Convention Relating To The Status Of Refugees* (Ohchr.Org, 1951), https://www.ohchr.org/EN/ProfessionalInterest/Pages/StatusOfRefugees.aspx.

[9] *Handbook and Guidelines on Procedures and Criteria for Determining Refugee Status under the 1951 Convention and the 1967 Protocol Relating to the Status of Refugees*, (UNHCR, 1967)

Prerequisites for torture, pillage and plunder, abuse, and genocide in Myanmar are in place and racism has become the strong source of constant communal violence towards the Rohingya ethnic group. Hated by state authorities, who have disavowed them of citizenship to a state which consists of the lands of their ancestor, as well as their neighbors, the defenceless and helpless minority have become casualty to effective ethnic cleansing. 'We fear we will be wiped out', are the fearful words of Tun Khin, a Rohingya human rights activist[10]. Being classified as 'world's most persecuted minority", the Rohingyas are stateless minorities, whose ethnic identity has never even been recorded in the list of 135 ethnic minorities in Myanmar. The members of the ethnic group recognize the non-existence of protection under the security umbrella of human rights and say, 'Rohingya people who are living in [Burma] don't have rights. Even a bird has rights. A bird can build a nest, give birth, bring food to their children and raise them until they are ready to fly. We don't have basic rights like that.'

The recent trends of influx of Rohingyas into Bangladesh, as well as the experiences they share imply that the people have fled due to fear of being persecuted. These experiences are embed within the songs and sketches of the refugees, and their unwillingness to return to their country due to fear is recorded through flight from refugee camps, sending off of their daughters to serve as housemaids of Bangladeshi households, marriage of their daughters to local villager and other such activities to meet their strategic needs[11].

International Commission on Intervention and State Sovereignty (ICISS) coined the concept of "responsibility to protect", otherwise also known as "R2P", in a report in 2001. Being the insidious nature of human rights violation carried out in Myanmar, the R2P was meant to incept it, and recognizes that the state must stop its horrendous violations of human rights of the Rohingya people (8). The Rohingya have already been deprived of the conditions of Article 2 of the Universal Declaration of Human Rights (UDHR), among others, which is regarding protection by Myanmar to all in a non-discriminant way. Myanmar is also a part of Convention on the Rights of the Child (CRC), the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), the Convention on the Rights of Persons with Disabilities (CRPD) and other key international treaties, besides the UDHR. Consequentially, it is

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10 Azeem Ibrahim, *The Rohingyas: Inside Myanmar's Hidden Genocide*.(London, England: Hurst and Company, 2016), 17-25

11 Kazi Fahmida Farzana, *Memories Of Burmese Rohingya Refugees*. (Palgrave Macmillan, 2017), 65

bounded by them. However, it is clear from the past and present atrocities it has been carrying out on the Rohingya people that Myanmar has violated the conditions of all of these treaties[12].

Historical Context: A History of Oppression

The end of the Second World War and the Cold War period saw the rise of number of refugees, asylum-seekers, along with an increasing volume of internal displacements[13]. This led to the crafting of the 1951 United Nations Convention relating to the Status of Refugees in order to address the refugee issues faced in the post-Second World War era[14]. The Rohingya refugee problem, fueled by the Rohingya humanitarian crisis, however, found its roots much earlier.

i. **Pre-Colonial Trends**

The Arakan region of Burma has always been essential for maritime trade as well as cultural exchange with the outside world, especially in the pre-colonial periods, as it provided the only access of the country to and fro with the rest of world. Beginning as plain visits, business ventures, and later internal and then external migration, the travel of Bengalis to and fro between the Indian Subcontinent and the Arakan region of Burma, a common phenomena during the pre-colonial and the colonial periods, began firstly as plain visits, business ventures, and as soldiers to protect foreign Muslim traders, before it took the form of external and internal migration[15]. Two theories have been proposed when it comes to the question of origin of the Rohingya people: one indicates that the Rohingya ethnic group originates from ancestors belonging to

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[12] "Report Of The United Nations High Commissioner For Human Rights: Situation Of Human Rights Of Rohingya Muslims And Other Minorities In Myanmar (A/HRC/32/18) – Myanmar," Reliefweb, accessed April 1, 2019, https://reliefweb.int/report/myanmar/report-united-nations-high-commissioner-human-rights-situation-human-rights-rohingya.

[13] *Convention Relating To The Status Of Refugees (Ohchr.Org, 1951), https://www.ohchr.org/EN/ProfessionalInterest/Pages/StatusOfRefugees.aspx.*

[14] Bilol Buzurukov, and Byeong Wan Lee. 2016. "A Comparative Analysis Of Forced Migration: Cold War Versus Post-Cold War Eras — Economics E-Journal". Economics-Ejournal. Org, accessed April 1, 2019, http://www.economics-ejournal.org/economics/discussionpapers/2016-23.

[15] AKM Ahsan Ullah, *Rohingya Refugees To Bangladesh: Historical Exclusions And Contemporary Marginalization.* (Cairo, Egypt: Center for Migration and Refugee Studies, The American University in Cairo, 2011), 11-19

Moorish, Arab and Persian trading groups, accompanied by Moghul, Turk, Pathan and Bengali soldiers, who spread and encourage the locals to convert to Islam, and later settled in the land and married local women, whom they have converted. The other theory suggests that Rohingya people are descendants of Bengali migrants from the previously known region of East Pakistan (now Bangladesh) along with some Indians who found their entry into the region during the British colonial rule period[16]. One of the central reasons why Rohingyas have been differentiated from the other majority people of Myanmar is due to the difference between the historical Burmese territorial ranges and the current Myanmar territory; what is now known as the modern Rakhine province was seldom a part of the earlier Burmese country, and thus plays a key role in addressing the distinction between the ethnic mix[17]. It is during the pre-colonial period that the first inflow of Rohingya refugees into what is now the present location of Bangladesh took place. This happened when the Rohingyas were collected with force initially from the predominantly Muslim Kingdom of Arakan and were joined into the larger part Buddhist kingdom of Burma in 1784. The oppression of the Burmese King Bodawpaya directed towards the people of the Arakan region, whether it be forced labor or forced occupation of land, led them to organize and take part in numerous revolts and insurrections to achieve freedom from the tyrannical rule. The failed Arakanese rebellions for independence from the Burmese, however, were punished with further subjugation, massacres, forced labor and such, which contributed to the influx of the Rohingya refugees into their neighboring British Bengal region rose to thousands[18].

ii. **Colonial Trends**

The colonial period for Myanmar began in 1824 and lasted for 64 years. The terrible oppression of the Arakanese by the Burmese caused them to be supportive of the British, who used Arakan as a buffer territory to gain access to invade mainland Burma. The British seized control of the entire southern region of Burma after the Second Anglo-Burmese War of 1852. This left the

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[16] Imtiaz Ahmed, *The Rohingyas: From Stateless To Refugee* (Dhaka, Bangladesh, 2010) http://www.netipr.org/policy/.../20100101_FromStatelessToRefugees_ImtiazAhmed.pdf.

[17] Azeem Ibrahim, *The Rohingyas: Inside Myanmar's Hidden Genocide*.(London, England: Hurst and Company, 2016), 12-21

[18] Hassan Faruk Al Islam and Md. Nannu Mian, "The Rohingya Refugees In Bangladesh: A Vulnerable Group In Law And Policy". *Journal Of Studies In Social Sciences* 8 no. 2 (2014): 226-253.

northern regions of the country completely cut off from the rest of the world. The Third Anglo-Burmese War of 1885 marked the loss of independence and sovereignty of Burma, and by 1886 the British had formed formal division between what was then called 'Ministerial Burma', which basically of consisted the Arakan, Rangoon and Irrawady region, and 'Frontier Areas', comprising of the majority of states within Burma today[19]. As a result, after gaining power in the entire region, the British authority had the redrawn in a way that separated the ethnic communities from one another and the mainland as well. It can be contended that this was the British policy of "divide and rule", which can be said is at fault for the initial animosities between ethnic groups. The British are known to have encouraged nationalistic movements among the ethnic groups, but did not take responsibility for it afterwards, besides exploiting the minorities and responded with inactivity when they were in need. The fact that Burma was ruled by the British as a province of the British India till 1937 is also prominent, as internal migration to Burma from British India was common[20]. Anti-colonial sentiments reached its crescendo in 1938. During this time Muslim writer under the pseudonym Maung Shwe Hpi had come under limelight, a writer despised by the Buddhist nationalists and monks. Anti-Muslim slogans filled a Muslim market area in downtown Yangoon when a certain write-ups of Maung Shwe Hpi published and were criticised and hated by the Burmese majority. This was countered by battalions of police, among whom the British had installed Muslim policemen. This confrontation led some Buddhist monks to be injured and this followed to eruption of attacks on Muslim communities across Yangoon, carnages which later extended to other places of the country[21]. The 1942 invasion of Burma by the Japanese caused the flight of many Rohingyas to British Bengal, due to the new massacres carried out on them[22]. Prior to the hasty leave of the British, some of the Rohingyas tried to lobby Arakan as an extension of Pakistan rather than Burma, but that went in vain[23]. As a result, following Burma's freedom in

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[19] Azeem Ibrahim, *The Rohingyas: Inside Myanmar's Hidden Genocide*.(London, England: Hurst and Company, 2016), 15

[20] AKM Ahsan Ullah, *Rohingya Refugees To Bangladesh: Historical Exclusions And Contemporary Marginalization.* (Cairo, Egypt: Center for Migration and Refugee Studies, The American University in Cairo, 2011), 16-20

[21] Francis Wade, *Myanmar's Enemy Within*. (London, UK: Zed Books, 2017), 23-50.

[22] Imtiaz Ahmed, *The Rohingyas: From Stateless To Refugee* (Dhaka, Bangladesh, 2010) http://www.netipr.org/policy/.../20100101_FromStatelessToRefugees_ImtiazAhmed.pdf.

[23] Moshe Yegar, *The Muslims Of Burma* (Wiesbaden, Germany: Harrassowitz Verlag, 1972), 34.

1948, the circumstance in these fringe states worsened, and conflict escalated with the Burmese government. The mapping of the new state hence begun a fight for the minorities, including the Rohingyas, in the outskirt zones. The current treatment of Rohingyas in Myanmar has a lot to do with these past historical events[24].

iii. **Post Colonial Trends**

January of 1948 marked the end of British colonial rule in Burma, after which the new state was based on its previous pre-colonial territorial boundaries. One of the initial controversies was regarding whether the ethnic and religious minorities should be allowed to stay in the new Buddhist and Burmese majority, and Buddhist and Burmese nationalism driven state, a characteristic that it inherited from its previous colonial ruler. Those who formed the counter arguments to this concept, such as General Aung San asserted that inclusion of all who live within the border of the new state was paramount and that they all should be seen as Burmese citizens. Indeed, had the progression been so, the future of Rohingyas and their current condition can be expected to have had a different turn. The assassination of General Aung San was followed by shift towards the idea that the new state should be made so that it bear a pure Burmese national character[25]. The beginning of the post-colonial period was marked by weak democratic structure, which was soon replaced by dominance of General Ne Win after a coup in 1962. The Rohingya people were not granted citizenship, but had government-issued identity cards, besides British ration cards, which was proof of their deserving citizenship, according to the conditions of achieving citizenship ascribed in the Constitution of Myanmar[26]. After his ascendance to power Ne Win began a widespread nationalization programme, under which hundreds of thousands of Indians faced exodus from Myanmar[27]. He was much driven by what is known now as the modern conceptualization of states, which involved acknowledging "us" and creating

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24 Kazi Fahmida Farzana, *Memories Of Burmese Rohingya Refugees*. (Palgrave Macmillan, 2017), 32-47.

25 Azeem Ibrahim, *The Rohingyas: Inside Myanmar's Hidden Genocide*.(London, England: Hurst and Company, 2016), 18.

26 Syeda Naushin Parnini, "The Crisis Of The Rohingya As A Muslim Minority In Myanmar And Bilateral Relations With Bangladesh". *Journal Of Muslim Minority Affairs* 33, no. 2 (2013): 281-297. doi:10.1080/13602004.2013.826453.

27 Nyi Nyi Kyaw, "Unpacking The Presumed Statelessness Of Rohingyas". *Journal Of Immigrant & Refugee Studies* 15, no. 3(2017): 269-286. doi:10.1080/15562948.2017.1330981.

"them", leading to "other-ing"[28].

In the 1970s, the government was known to be using policies which Arakanese as a whole recognized as the government's attempts of creating a wedge between the majority Buddhist Arakanese and the minority Muslim Arakanese, otherwise referred to as Rohingyas. This came at a time when there was a growing alliance between the two religious groups, which the government recognized as a threat that could lead to renewed age-old Arakanese freedom movement. The occurrence of a failed coup from the Arakanese people further complicated the matter as the government, feeling as if this was an attempt to remove it from power, reacted with counter insurgency operations against the Rohingyas[29]. Operation Nagamin or Operation Dragon King was launched by the military junta in February 1978, due to which the falsely accused indigenous Rohingya people were subject to persecution on the grounds of allegations of violation of national laws through 'illegal immigration'. This consequently led massacres and eviction of people belonging to the minority. This prompted around 250,000 Rohingyas to move to Bangladesh for fear of life. The following year Myanmar struck a repatriation deal with Bangladesh due to international pressure. However, little did the newly repatriated Rohingyas know that only three years later they would be devoid of almost all opportunities to attain citizenship, when the 1982 Citizenship Law was passed. Not only did it deny Rohingyas citizenship, but also decreed stateless approximately 800,000 Rohingyas in North Rakhine. By the late 1980s the regime of the military junta had grown increasingly agitated that the area of the country was being "lost" to Muslims[30] and in 1988, under the State Law and Order Restoration Council (SLORC), it built up a number of new military cantonments in the Rakhain state, centering on the north of the region, where the Muslim population mainly lived. The Rohingyas moved onto to become 'homeless' besides 'stateless' as the military forcibly took over their lands for their new setups. The period of 1991-92 marked another influx of 250,000 Rohingyas into Bangladesh due to the military crackdown in the region after a successful democratic election, but the military junta's refusal to hand over power[31]. This led to loss of credibility of the military regime in the eyes of the

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[28] Kazi Fahmida Farzana, *Memories Of Burmese Rohingya Refugees*. (Palgrave Macmillan, 2017), 57.

[29] Imtiaz Ahmed, *The Rohingyas: From Stateless To Refugee* (Dhaka, Bangladesh, 2010) http://www.netipr.org/policy/.../20100101_FromStatelessToRefugees_ImtiazAhmed.pdf.

[30] Francis Wade, *Myanmar's Enemy Within*. (London, UK: Zed Books, 2017), 52-75.

[31] Abul Milton, et. al. "Trapped In Statelessness: Rohingya Refugees In Bangladesh". *International Journal Of Environmental Research And Public Health* 14, no. 8 (2017): 942. doi:10.3390/

majority Myanmar populance. In order to keep the power in hand the military regime sought to consolidate the Burmese majority, as well as cause dissention among minorities that had been banding together during the phase of the democratic change. As a result, the government resorted back to the policy of using 'race and religion', much like it had in 1978, for implementations of its objectives. Another matter at hand was the trauma of the massacre of numerous Buddhist monks during anti-government demonstrations in 1990. The military junta used this situation to their advantage by targeting the Muslim Rohingyas, an eye-sore for the majority Buddhist population, in November 1991[32].

From a historical context it can be said that the Rohingyas have always been preyed upon and ravaged by many. The factor of religion has consistently been a key element working at the background. The Rohingya Muslims of Burma in all three eras have been subject to much oppression and victim to persecution and injustice. Starting from their pre-colonial immigrant status, their support for the British due to the tyranny they faced from their Buddhist rulers, their failed attempts to lobby annexation into Pakistan, along with their racial, religious as well as linguistic differences, the Rohingyas have always faced subjugation for these reasons, even though they are never said out loud. The trends that followed are, unfortunately, not much different from what has become a ritualistic tendency of the greater majority of the people of the country to impose upon the weak and helpless Rohingya people.

iv. Recent Trends of Rohingya Refugee Influx into Bangladesh

From the very beginning, religion has been core to the rulers of Myanmar. The endeavors to use religion to strengthen national identity arguably began a millennium ago with the rise of King Anawratha to the throne, a late convert to Buddhism who used the scriptures to help achieve what had eluded all rulers before him: the uniting of the disparate peoples of the Ayeyarwady Valley, that long, snaking north–south backbone of the country, into one functioning, governable kingdom. The ethnic and religious chauvinism towards non-Burmese and non-Buddhists played a central role in driving the independence movements in 1920 and 1930s. In the 20th century, the idea that Myanmar's survival as a nation could only be possible through the purge of foreign influences and return of Buddhism to center stage has been the most

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ijerph14080942.

[32] Imtiaz Ahmed, *The Rohingyas: From Stateless To Refugee* (Dhaka, Bangladesh, 2010) http://www.netipr.org/policy/.../20100101_FromStatelessToRefugees_ImtiazAhmed.pdf.

popular characteristics in the country[33]. Buddhist nationalism became much more visible since the beginning of the political transition in 2011. Prior to that, the new "democratic" change of the government in 2008 led to the transfer of much control of the Rakhine state politics to go into the hands of local parties—namely the Rakhine National Development Party (RNDP) and Arakan National Party (ANP). Many monasteries were known to have close relations with these local parties, which boosted opportunities for Buddhist extremism in the region. The period between 2008 and 2012 marked a period of continual persecution and oppression of the Rohingya people. This particular period of despotism had a particular religious aspect. The period saw the demolition of numerous mosques which were asserted to have had been built upon land without proper permit and appropriate consent. The conception of 'Muslim Free Areas' in some areas of the state was also seen in that period. Additionally, Buddhist pagodas have been built in territories with no Buddhist populace, frequently utilizing Rohingya labor force. The period also saw a progressing effort to tempt Muslim Rohingyas to convert to Buddhism by offering removal of restrictions on travel, work and education, and the other rights of citizenry they have been devoid of for so long. These policies, along with continued practices of discrimination, including limitations on family size, mirror the determination of local parties to force Rohingyas out of Myanmar. The consistent utilization of ethnic tensions as a political apparatus reached a crucial stage in 2012[34]. The upliftment of the authoritarian regime revealed new freedoms to the people of Myanmar, which included freedom of thought, freedom of speech, freedom of press and access to new forms of telecommunication as well as social media. These new advances helped in exacerbation of the conditions of the Rohingyas, as the new freedoms allowed free expression and exchange of anti-Muslim sentiments among the Buddhist nationalism driven people[35].

The violence erupted from the rape and murder of Rakhain Buddhist woman by three Muslims on May 28, 2012. The immediate result of this was the killing of 10 non-Rohingya Muslims on a bus by a mob of 300 Buddhist vigilantes on 3rd June in Taungup, an area of where outrage had spread like wild fire

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[33] Francis Wade, *Myanmar's Enemy Within*. (London, UK: Zed Books, 2017), 97.

[34] Nehginpao Kipgen, "Conflict In Rakhine State In Myanmar: Rohingya Muslims' Conundrum". *Journal Of Muslim Minority Affairs* 33, no. 2 (2013): 298-310. doi:10.1080/13602004.2013.810117.

[35] "Buddhism And State Power In Myanmar," Crisis Group, accessed April 1, 2019, https://www.crisisgroup.org/asia/south-east-asia/myanmar/290-buddhism-and-state-power-myanmar.

following release of graphic pictures of the incident of the Rakhain woman. On the 8th of June, the Rohingyas launched an attack on Rakhine homes and businesses in the Maungdaw region. This further spread to other regions like Rathedaung, Kyauktaw, Pauktaw, Sittwe, Mrauk-U, Kyaukphyu, and Yanbye, where the Rakhains retaliated against the Rohingyas. This resulted in a sweeping schismatic conflict between the Buddhist majority and the Muslim minority in the region. On October 21st another round of fatal communal violence erupted, which led the Rakhains to burn a Muslim village in Paik-The quarter of Minbya. The prompt aftereffects of the two rounds of partisan conflicts and violence were loss of the lives of 192 Rakhine and Rohingya/non-Rohingya Muslims, wounds of 265 individuals, devastation of 8,614 houses and obliteration of 120 businesses, as indicated by the Final Report of the president designated Inquiry Commission on Sectarian Violence in Rakhine. Approximately 140,000 Rohingyas were displaced during the period[36].

In October 2016, a resurgence in insurgent activity along the border and consequent military operations resulted in over 87,000 of the Rohingya people crossing into Bangladesh[37]. On August 25th, 2017, the latest military crackdown on the Rohingya civilians has resulted in a massive influx of Rohingya refugees into the Bangladesh. The cause of the crackdown was the attack of several police stations and outposts by a group under the banner name of Arakan Rohingya Salvation Army (ARSA) in the Rakhine state of Myanmar. Atrocities, rape, destruction of properties, including burning of several Rohingya villages, besides mass killings compelled the Rohingya people to cross the border and pour into Bangladesh for safety of life[38]. The number Rohingya refugees in Bangladesh from the influx of August 2017 stood at 911,000 as reported in January 2019[39].

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[36] Nehginpao Kipgen, "Conflict In Rakhine State In Myanmar: Rohingya Muslims' Conundrum". *Journal Of Muslim Minority Affairs* 33, no. 2 (2013): 298-310. doi:10.1080/13602004.2013.810117.

[37] James Griffiths, "Is The Lady Listening? Aung San Suu Kyi Accused Of Ignoring Myanmar's Muslims". *CNN*, November 17, 2017, accessed April 1, 2019 https://edition.cnn.com/2016/11/17/asia/myanmar-rohingya-aung-san-suu-kyi/index.html.

[38] "Rohingya Crisis: Policy Options And Analysis," BIPSS, accessed April 1, 2019, http://bipss.org.bd/pdf/Rohingya-Policy%20Brief.pdf.

[39] "ISCG Situation Report: Rohingya Refugee Crisis, Cox'S Bazar | January 2019 - Bangladesh". Reliefweb, accessed April 1, 2019, https://reliefweb.int/report/bangladesh/iscg-situation-report-rohingya-refugee-crisis-cox-s-bazar-january-2019.

Recent Developments And Keeping Out the 'Others'

Religious nationalism is a phenomenon that is on the rise all over the world. Hence, the existence of Buddhist-Burmese nationalism is not unique to Myanmar. It has played a significant role starting from when the state gained its independence in 1948 from its colonial master, the British. In the 21st century, the initial democratic progress in 2011 removed the barriers to communication and mainstream social media, and marked the uprising against the Muslim minority by the Buddhist majority in the Arakan region, along with other parts of Myanmar. Eased telecommunications made dispersement of nationalistic narratives much faster and accessible when the rape of a Buddhist Burmese female by three Muslim males on public transport spontaneously burst through the social media portals and made news headlines. The 2012 violences and sectarian conflicts between the Rohingya Muslim minority and the Buddhist majority in Rakhine state of Myanmar also saw these new accesses play a pivotal[40].

Geographically, Rakhine has also been a transition point of the Buddhist and Muslim Asia. It is by Myanmar and the Buddhist South East Asia considered as an important "Western Gate", the breach of which by Islam would have erased Buddhism from the rest of South East Asia. Other assumptions include that Muslims across the country accumulate capital and properties, with which they woo Buddhist women, and expand their community by converting them[41]. In reference with the motto of the Myanmar immigration ministry that, "a race does not face extinction by being swallowed into the earth, but from being swallowed up by another race," the policy of suppression of the Muslim minority of Rakhine has been a synonymous part of action. In 2009, Mr. PhaeThannOo, the then ambassador of Myanmar to Bangladesh, gave a statement to Dhaka Courier in an exclusive interview and expressed the definition of 'Rohingya' by the Myanmar government, "The Rohingyas are an unfortunate issue between the two countries. The so-called 'Rohingyas' for you of course, not for us. For us, they are Bengali Muslims." This statement is a clear indication of how the Myanmar government view 'Rohingyas' when it comes to acknowledging them[42].

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[40] Nehginpao Kigpen, "Addressing The Rohingya Problem". *Journal Of Asian And African Studies* 49, no. 2(2013): 234-247. doi:10.1177/0021909613505269.

[41] "Buddhism And State Power In Myanmar," Crisis Group, accessed April 1, 2019 https://www.crisisgroup.org/asia/south-east-asia/myanmar/290-buddhism-and-state-power-myanmar.

[42] Kazi Fahmida Farzana, *Memories Of Burmese Rohingya Refugees*. (Palgrave Macmillan,

The State Counselor of Myanmar, Ms. Aung San Suu Kyi, has been largely silent regarding the latest military crackdown on the Rohingya people, despite her expressions of grievance and condemnation of violation of human rights. She asserted that the scale of the crisis was largely inflated due to the distortion caused by "a huge iceberg of misinformation", and also indicated that not all Muslims were leaving Rakhine[43]. While in September 2017, the Nobel Peace Prize laureate said her administration had "already started defending all the people in Rakhine in the best way possible," in December of the same year, the UN extraordinary rapporteur on human rights in Myanmar, Yanghee Lee, was denied access by the government of Myanmar, suspending collaboration for the rest of her term. This sparked a lot of international suspicion[44]. Mark Farmaner, director of Burma Campaign UK, has asserted that the Ms. SuuKyi has developed "authoritarian tendencies" and used oppressive laws[45].

However, it must also be kept in mind that even though a landslide victory was won by National League for Democracy, Ms. SuuKyi, now the new leader of the state is yet to attain reigns over three vital ministries from the military—home affairs, defense and border affairs. This means that the military is largely responsible for the atrocities being carried out at the border region, and moves against this by the State Counselor could mean opposition from the Buddhist nationalists and Burmese chauvinists[46]. While the military crackdown, thus, may have been attempts to arouse popular support for the military administration, in such awkward situations, this could be one of the reasons for Aung San SuuKyi's silence regarding the matter.

The Myanmar government's relentless attempts to prove the Rohingya as Bengalis, even after signing of an unsuccessful Rohingya refugee repatriation deal in November 2017, took an unpredictable turn with the publication of fake photos in a new book on the Rohingya crisis, which indicated the alleged

2017), 97.

[43] "Rakhine: What Sparked Latest Violence?" BBC News, accessed 2, 2019, https://www.bbc.com/news/world-asia-41082689.

[44] Eleanor Albert, and Andrew Chatzky, "What Forces Are Fueling Myanmar'S Rohingya Crisis?". *Council On Foreign Relations*, December 5, 2018, accessed 2, 2019, https://www.cfr.org/backgrounder/rohingya-crisis.

[45] Karen McVeigh, "Aung San Suu Kyi Complicit In Rohingya 'Ethnic Cleansing' In Myanmar, Mps Told," *The Guardian*, November 15, 2017, accessed April 2, 2019, https://www.theguardian.com/global-development/2017/nov/15/aung-san-suu-kyi-complicit-in-rohingya-ethnic-cleansing-in-myanmar-mps-told.

[46] "Is Refugee Crisis 'Textbook Ethnic Cleansing'?" *BBC News*, accessed April 2, 2019 https://www.bbc.com/news/world-asia-41566561.

atrocities by "illegal Bengali immigrants" on April 2018. However, the false allegations made via the false pictures was soon caught red-handed when acclaimed international news agency Reuters revealed previously published pictures of previous incidents, which were merely edited for publication in the Myanmar military-authored book[47].

Burmanization of Myanmar at A Glance

i.   Central Authority

Myanmar has pursued a policy that is heavy on its nationalistic sentiments ever since its independence. This has affected life in the country in numerous ways. The cultural ways and languages have been censored in a ways manifold. Various ethnic communities have been thrown into a system where they have no other way but to gradually take up the Burmese culture, learn about the Burmese history, and, without realization, experience their ethnic roots dissolve[48].

While these are soft policies which are meant to mold in the 135 ethnic communities into Myanmar's policy of Burmanization, the most direct implication of this has been aced by the Indian nationals who had come to the Burmese land during the British colonial period. They were brought to Myanmar, the then Burma, as a part of the British divide and rule policy. The Indians were empowered with the many privileges they enjoyed in the Burmese lands and were allowed to dominate large sectors of Burmese businesses and agriculture, creating a large gap of inequality between the Burmese and the Indians. To add more fuel to fire, the Burmese were also victim to high rates of interest on loan from Indian businessmen, the failure of delivery of which were met by harsh actions. However, the Indian influence over the Burmese economy did not last much longer after Myanmar gained its independence, as it had begun to dissolve due to the nationalization policies taken to curb foreign influence over the region. Nevertheless, for a long time, Indians still yielded considerable influence due to the significant contribution made to the

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47 Poppy McPherson, "Exclusive: Fake Photos In Myanmar Army's 'True News' Book On The Rohingya Crisis". *Reuters*. August 31, 2018, accessed April 2, 2019. https://www.reuters.com/article/us-myanmar-rohingya-photos-exclusive/exclusive-fake-photos-in-myanmar-armys-true-news-book-on-the-rohingya-crisis-idUSKCN1LF2LB.

48 Denis D. Gray, "Myanmar'S Ethnic Minorities Lament 'Burmanization'". *Sfgate*, March 17, 2018, accessed April 2, 2019, https://www.sfgate.com/world/article/Myanmar-s-ethnic-minorities-lament-12761351.php.

Burmese economy. According to Louis Walinsky, the reasons were such[49]:

"Because the Indians and, to a lesser extent, the Chinese find it difficult to win acceptance and status in Burmese society, their motivation to achievement in the economic world is far stronger than that of the Burmese, and has spurred them to innovation and enterprise as well as hard work. These resident alien groups have made a contribution to Burma's economic development out of all proportion to their numbers (in 1960 there were 500,000 Indians and 300,000 Chinese in a population of 20,000,000) and they possess the potential for even greater contribution. This potential they have not been permitted to realize. Indians particularly, have been discriminated against, even harassed, at every turn, whether in citizenship, in government employment, in the applica- tion of regulations, in the issuance of licenses, in the extension of loans, in permission to make remittances abroad, and in the repatriation of capital assets."

Here, Walinsky indicates the limitations imposed on the Indian nationals, along with any other foreign nationals in the 1950s, which were made harsher following the Revolutionary Council's Burmanization program. The first of the many policies placed was that of stripping foreign nationals from their economic power and status, by forbidding them to own land, limit private enterprise ownership and remit funds to their homelands, among other forms of repression; these charges were applicable to the Indian and Chinese minorities in the country only. The early 1960s saw violence directed towards the Indians, who had by now been stripped of most of their power and status in the country. Following this, the Indian repatriation, assisted by Indian ships at Rangoon port, took to massive numbers. By the summer of 1964, 2,500 foreign nationals were leaving Burma every week, and most of them were Indians, followed by a good number of Pakistanis. Approximately 3,000 Indians took flights back to India on a monthly basis, while the others had to walk the difficult Indian-Burmese border. Many families were not allowed to carry items such as family jewelries, clothes and even utensils, and by September 1964, approximately 100,000 Indians had faced displacement due to the 'economic squeeze out'[50].

Now it is expected that the Rohingya, who have ever since been the next target to 'squeeze out', were the victim of the same Burmanization policy, but in a much more violent manner. The 'ethnic cleansing' of the Rohingya

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[49] Louis Joseph Walinsky, *Economic Development In Burma, 1951-1960*. (New York, USA: Twentieth Century Fund, 1962) 45-48.

[50] Robert A. Holmes, *Burmese Domestic Policy: The Politics Of Burmanization* (California, USA: University of California Press, 1967), http://www.jstor.org/stable/2642237.

has led to over 700,000 of the Muslim minority to flee Myanmar, according to United Nations reports[51]. As a result, an example has been set about the harsh consequences of threat against the central authority's policy of imprinting the Burmese identity into the Myanmar territory completely. In Myanmar, the Rohingyas are not considered to have the Burmese central identity, as they are considered to be illegal immigrants from Bangladesh, due to the linguistic, religious and racial similarities they have with the people of the neighbouring country. Hence, they pose an even greater threat to the efforts of the Myanmar authority to make their state one with pure Buddhist-Burmese nationality.

ii. Wirathu and MaBaTha: Behind the Scenes of Anti-Muslim Sentiments and the 969 Movement

While the 969 Movement of Myanmar is generally portrayed by Buddhists as a peaceful way to 'protect religion' and 'prevent the overrun of Myanmar by Islam', it resulted into taking up of harsh economic and legal policies that resulted mass exodus of Rohingya refugees all over the world in 2012 and 2013. Beginning in April 2012, Myanmar saw a mass boycott of Muslim owned businesses, as well as introduction of legislation sponsored by the movement[52]. The movement encouraged Buddhist businessmen to brand their shops with the Buddhist or sasana flag, with the Burmese digits 969 superimposed on it[53]. The movement also included speeches of spiritual leader of the 969 movement and head of MaBaTha, Ashin Wirathu, whose speech triggered the riots in Meiktila that resulted in deaths of over a hundred and the burning down of a mosque to the ground[54].

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[51] "Myanmar Prepares For The Repatriation Of 2,000 Rohingya | The Thaiger," The Thaiger, accessed April 2, 2019, https://thethaiger.com/news/regional/myanmar-prepares-for-the-repatriation-of-2000-rohingya.

[52] Nathan Thompson, "The 969 Movement And Burmese Anti-Muslim Nationalism In Context - Buddhist Peace Fellowship". *Buddhist Peace Fellowship*, July 2013, accessed April 2, 2019, http://www.buddhistpeacefellowship.org/the-969-movement-and-burmese-anti-muslim-nationalism-in-context/.

[53] Paul Fuller "Whatever Happened To Buddhism, Religion Of Peace And Compassion?". *South China Morning Post*, June 23, 2018, accessed April 2, 2019, https://www.scmp.com/week-asia/politics/article/2152083/blood-sutra-whatever-happened-buddhism-religion-peace-and.

[54] Marella Oppenheim, "'It Only Takes One Terrorist': The Buddhist Monk Who Reviles Myanmar's Muslims". *The Guardian*. May 12, 2017, accessed April 3, 2019, https://www.theguardian.com/global-development/2017/may/12/only-takes-one-terrorist-bud-

While the 969 Movement, launched and mobilized by MaBaTha, as well as the organization's leading monks have been accounted for some of the most strongest and horrific anti-Muslim rhetoric, the acts have been portrayed as directed towards protection and preservation[55]. The words of Buddhist monk Ashin Wirathu are said to have massive influence over the 969 Movement in Myanmar. However, he claims that his words were never that of hate, but simply of warning that the Muslims were going to take over Buddhism in the country. He also believes that Muslims pose a security threat, and claims that his motivations also include his unwillingness to let what happened in the west due to terrorism happen in Myanmar. An online access of The Guardian reported that he denied to take any accountability[56]:

"His denial of responsibility for the violence that has followed his sermons contrasts with eyewitness accounts of knife-wielding monks, denim jeans visible under their robes, leaving Wirathu's monastery during the Mandalay riots of 2013."

The government of the country is also known to have had given the initiatives of Wirathu and MaBaTha their support and "blessings"[57]. This has been displayed in the political and economic articulation of the country towards a Buddhist biased manner. The recent "re-opening up" have played into the favor of the group, as it has allowed greater and faster reach of the messages of the group. This is portrayed by significant number of instances of violence where the involvement and support of the organization behind the scenes. The organization, while having a touch over the grassroots, also have "an invisible hand" with their increased political activism since the beginning of the era of democratic change in the country[58].

dhist-monk-reviles-myanmar-muslims-rohingya-refugees-ashin-wirathu.

55 Benjamin Schonthal, and Matthew J. Walton. 2016. "The (New) Buddhist Nationalisms? Symmetries And Specificities In Sri Lanka And Myanmar". *Contemporary Buddhism* 17, no. 1 (2016): 81-115. doi:10.1080/14639947.2016.1162419.

56 Marella Oppenheim, "'It Only Takes One Terrorist': The Buddhist Monk Who Reviles Myanmar's Muslims". *The Guardian*. May 12, 2017, accessed April 3, 2019, https://www.theguardian.com/global-development/2017/may/12/only-takes-one-terrorist-buddhist-monk-reviles-myanmar-muslims-rohingya-refugees-ashin-wirathu.

57 Andrew Marshall, "Special Report: Myanmar Gives Official Blessing To Anti-Muslim Monks". *Reuters*. June 27, 2013, accessed April 3, 2019, https://www.reuters.com/article/us-myanmar-969-specialreport/special-report-myanmar-gives-official-blessing-to-anti-muslim-monks-idUSBRE95Q04720130627.

58 Benjamin Schonthal, and Matthew J. Walton. 2016. "The (New) Buddhist Nationalisms? Symmetries And Specificities In Sri Lanka And Myanmar". *Contemporary Buddhism* 17, no. 1 (2016): 81-115. doi:10.1080/14639947.2016.1162419.

Conclusion

Buddhist-Burmese nationalism also means aggressions against other ethnic communities within Myanmar. However, the situations are not as bad as in the context of the Rohingya ethnic community, who have been differentiated as racially, linguistically and religiously from the rest of the people in Myanmar. Buddhist-Burmese nationalism is one of the main drivers of Myanmar government's attempts of "Burmanisation" of the country, and the foreign policy of the state in context with the Rohingya refugee crisis is heavily influenced by this as well. The repeated oppression and aggression against the Rohingya ethnic community, even after multiple repatriation projects, the enforcement of the 1982 Citizenship Law, by which the chances of getting citizenship by the Rohingya became impossible, the atrocities carried out against the eyesore Rohingya ethnic community after a failed democratic elections in the country 1991, the killings during 2016 alleged Arakan Rohingya Salvation Army (ARSA) member manhunt, and finally the 2017 military crackdown, are repeated alike policies of the Myanmar government, even after multiple regime changes, to oust the Rohingya people from the country.

Attempts of conservation of the Buddhist-Burmese identity of the state of Myanmar and chauvinist tendencies of the state leaders, backed by the Buddhist-Burmese population, have been largely visible throughout the atrocities carried out within the country by the Buddhist-Burmese majority against the ethnic minorities. However, the oppressive domestic and now foreign policies directed at keeping the Rohingya minority out of its territory, has largely been successful for the Myanmar government. Backed by unsuccessful attempts of repatriation and general attitude of denial of acceptance of the Rohingya people, the Myanmar government has been largely criticized for its atrocious violations of human rights and their unacceptance of the Rohingya ethnic community. In face of violent criticism, the Myanmar government has mostly opted to remain tight-lipped, even though some of their most prominent and high-ranking military personals have been charged directly of leading the mass genocides. The international non-governmental organizations are focusing largely on human rights issues. Amnesty International, has identified and brought international attention to the top brass of the Myanmar military, and these personals are facing a variety of smart or targeted sanctions. The members of the ethnic group recognize the non-existence of protection under the security umbrella of human rights and say, 'Rohingya people who are living in [Burma] don't have rights. Even a bird has rights. A bird can build a nest, give birth, bring food to their children and raise them until they are ready to fly. We don't have basic rights like that.'[59]

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59 Kazi Fahmida Farzana, *Memories Of Burmese Rohingya Refugees*. (Palgrave Macmillan,

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