

Addressing Climate Change under GATT/WTO Regimes: Potential Legal and Policy Options under TRIPs

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Abstract

According to the World Bank's recent trend of trade statistics, it reveals that, there is almost 32 per cent increase of global export of trade in goods since 2006 which amounted US\$16 trillion in 2016. With a 10 percent increase, global export becomes US\$ 19.67 trillion in 2018. Although it started declining in the later years due to global pandemic yet, with this expansion of global trade, the role of WTO has been debated by different researchers. Considering the sluggish progress of the global climate related undertakings, a dynamic climate negotiation under a multilateral trade and Intellectual Property (IP) regime which have binding commitments is realised. Given the background, this paper endeavours to develop an overarching argument on accommodating climate initiatives under WTO regime. A sharper focus has been given on the IP and climate change with an emphasis on the grant and exercise of patenting clean technologies within the context of the Agreements on Trade Related Aspects of Intellectual Property Rights (TRIPs) with a view to exploring legal and policy options to address climate change. Finally, better reform to identify appropriate TRIPs standards and flexibilities would be suggested which would not unnecessarily hinder free flow of international trade, rather would be mutually supportive to face global climate challenges.

Keywords: Climate change, Kyoto Protocol, Intellectual Monopoly, necessary evil, Trans Pacific Partnership Agreement, Environmentally Sound Technology, WTO, TRIPS, Subsidies and Countervailing Measures, technology transfer

INTRODUCTION

The General Assembly of the United Nations considered climate change as 'a common concern of mankind' [1] which has been reflected in the preamble of the UN Framework Convention on Climate Change (UNFCCC) as "change in the Earth's climate and its adverse effects are a common concern of humankind" [2]. At this point, this widely considered global concern should be addressed with an effective multilateral legal framework balancing the Intellectual Property Rights (IPRs) with the diffusion of clean technology. During the last few decades it was tried to address this issue through different multilateral undertakings such as the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement etc. The 1992 UNFCCC creates the foundation to combat global climate change at multilateral level. Later, under this Convention the 1997 Kyoto Protocol and the 2015 Paris Agreement were negotiated to limit the increase of average global temperature.

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On the other hand, this issue was not part of any work programme under General Agreements on Tariff and Trade (GATT) or World Trade Organisation (WTO) and there were no specific rules to address climate change under this framework. But, recently research finds that there is a closer but conflicting relationship among Trade, Climate Change and Intellectual Property Rights (IPRs) which has gained a new dimension of

addressing climate change adaptation and mitigation under GATT/WTO regimes. Recent trend of trade statistics reveals the fact that, there is almost 32 per cent increase of global export of trade in goods since 2006 which amounted US\$16 trillion in 2016 [3]. With this expansion of global trade, the role of WTO to combat the global climate challenges under its purview has been debated by different researchers. Considering the sluggish progress of the global climate related undertakings, a dynamic climate negotiation under a multilateral trade and IP regime which have binding commitments is realised. Given the background, this paper endeavours to develop an overarching argument on accommodating climate initiatives under GATT/WTO regime. A sharper focus will be given on the IPRs and climate change with an emphasis on the grant and exercise of patenting clean technologies within the context of the Agreements on Trade Related Aspects of Intellectual Property Rights (TRIPs) with a view to exploring legal options to address climate change. Finally, better reform to identify appropriate TRIPs standards and flexibilities would be suggested which would not unnecessarily hinder free flow of international trade, rather would be mutually supportive to face global climate challenges.

THE CONFLICTS AND DEBATES AMONG CLIMATE CHANGE, TRADE AND IPRS

In the existing literature, immense debates and conflicts among trade, climate change and IPRs have been found. Notably, Matthew Littleton found the debate on whether strong protection of IPRs expedites or deters transfer of clean technology to developing countries (Matthew Littleton, 2008). He is of the view that keeping this question aside, there are some tools under IPRs that can be used for the protection of invention incentivizing the patent owner at the cost of economic and environmental profits which would ensure such technology transfer. Frederick Abbott has focused the debate over the access to essential medicines and clean technology [4].

There is basic a conflict between IP, trade and climate change which makes this issue more complex and creates tripartite debate among developed, developing and Least Developed Countries (LDCs). In this sense, it is difficult to establish the balance of rights and obligations as recognised under Article 7 of the TRIPs agreement. These difficulties of balancing climate change mitigation strategy are mostly related to the exclusive patent rights which results the unavailability of the required technologies in the developing and LDCs. A. Machnicka in his paper “TRIPs and Climate Change in the International Economic Order” argued that if Patent law, as an element of climate mitigation is supported by sufficient legal frameworks and efficiently utilized then climate change goals could be achievable under such framework [5].

There is a basic conflict of the WTO is to set and administer the rules to ensure free flow of international trade through different agreements. With this objective, primarily, it was mandated to lowering tariff and non-tariff barriers for trade in goods and services. Unfortunately, at the beginning nothing was mandated to cover environment-friendly goods and services under these reduction strategy (Sugathan, 2007) which starts conflicts between trade and environment resulting adverse effect on climate. In this situation, an equilibrium is required to further liberalizing trade to combat climate change which is increasingly gaining wider global attention. It is interesting to note that, the WTO is in favour of the compatibility and harmony of multilateral trading system with that of the climate change undertaking which has been expressed in different speeches of Pascal Lamy, ex-Director General of the WTO. In his speech, the complementarity between the climate law and trade regimes have been emphasised [6]. He opined favouring the convergence between the broader objectives of the international trading system and climate change framework (Rimmer, 2016). He termed the climate related crisis as the ‘single biggest challenge to civilization’ [7] and agreed on the argument that multilateral trade, economic and political landscape has a significant role to address this global crisis. Contradictorily, no significant initiatives have been taken under WTO framework, rather disharmony and incompatibility have been found which has been stressed by Rimmer.

In some literature, it is found that there are legal and policy options under GATT/WTO framework. But, there exists a fundamental conflict between climate change action and trade policy to address those

options. In this context, there has been a significant debate among different group of members in the WTO as they have different views and interests. The World Trade Organization has provided context for discussions on the subject, stating that "the challenge of developing green technologies and disseminating them to where they are needed brings intellectual property into the frame [8]." In this debate over the linkage between trade and climate change, it is meaningful to focus the context of IPRs. Developing countries view regarding this debate was to ensure transfer of clean technology for them with an affordable price. Khor stressed:

To meet their climate change mitigation and adaptation goals and progress toward a more sustainable development path, developing countries require affordable access to environmentally sound technology [9].

Contrarily, the dominance of clean technologies' patent is based on developed nations' companies; for instance, Japan, the US and the EU etc., which was mentioned in the South Centre report: 'In the case of environmentally sound technologies, there is a strong case that IPRs impede developing countries' ability to achieve EST, as well as new technologies in general [10].'

With the pressure from different developing countries for dealing with the role of IPRs addressing climate issue, the TRIPs Council in 2014 first started discussing on the issue entitled "Contribution of intellectual property (IP) to facilitate the transfer of environmentally rational technology" (Bhattacharya, 2014). This has been included as an agenda item after the Ecuador's request which establishes fragment of their proposal (IP/C/W/585) [11]. India argued in the TRIPs Council meeting that environmentally sound technologies were controlled mostly by private monopolies under patent rights including other IPRs [12]. They further argued that considering the six energy technologies viz., solar, concentrated solar power, wind, photovoltaic, biomass-to-electricity, cleaner coal and carbon capture, it was evident that Japan, the US, and Germany are mostly influential in clean energy innovations whereas, developing countries like China, Brazil and India have no such organization [13]. Obviously, diffusion of such technology would also be controlled by those developed countries. It is noteworthy that IPRs can play a significant role to ensure the affordable access to those technologies for the developing and LDCs.

At this point, Ecuador stressed that climate change is a significant issue which affect entire global community hence no member should deny the fact that it is essential to address the hostile effect of climate change. In response to the request of Switzerland to mention certain cases where prevailing IP system is creating problem, Ecuador referenced the patent application's information which did not permit the practice of technology transfer in the developing world particularly in case of exploiting invention while the period of patent has been expired [14]. Another issue was frequently questioned by different researches that 'excessive protection' of patent often creates stumbling block of technology transfer which has been revealed in response to another question by Switzerland where Ecuador responded that " 'excessive protection' was understood as not meeting the objective of Article 7 of the TRIPs Agreement [15]". It is worthy of mention that Ecuador referenced the book "Against Intellectual Monopoly" by Levin and Boldrine, in which it was argued that monopolies and patenting are not the best means for promoting innovation [16]. From this angle, Joseph Stiglitz and Becker's argument could be mentioned where they mentioned 'there were no suitable incentives offered by the patent system [17].' From this basis, Matthew Littleton argued that:

"Despite the numerous international commitments to promote transfer of climate-change related technologies to developing countries, these transfers are not occurring at a rate fast enough to help these countries in mitigation and adaptation to the effects of climate change" [18].

Yet, different countries raise the issue of transferring clean technology in the TRIPs council. Of them the Ecuador-initiated debate on IP, climate change, and development is considered with a view to finding the synergies and difference between developing and LDC countries' interest. Ecuador's

submission emphasised environmentally friendly technologies in this context, stating that "the issue of technology and its transfer is a fundamental aspect of the fight against climate change and adaptation to and mitigation of its harmful effects "It is therefore essential to reorient the global intellectual property regime in the context of adaptation and/or mitigation of the harmful effects of climate change," [19, 20] Ecuador argued. Ecuador proposed a variety of policy options to increase access to clean technologies, including compulsory licencing, crown use, voluntary licencing, patentability exemptions, patent term reductions, and open licencing [21]. Finally, Ecuador called for an overarching declaration on intellectual property and climate change:

“We could consider adopting at the Bali Ministerial Conference a declaration in which Members would enshrine the principle that “nothing in the TRIPs Agreement 1994 can minimize or impair the flexibilities provided for in that Agreement, nor prevent or limit Members taking measures they consider necessary to protect their population from the effects of climate change and to make use of environmentally sound technologies” [22].

Most other countries support Ecuador’s submission, but no significant progress have been found yet due to the varied interest groups. According to the Centre d’Economie Industrielle (CERNA) study "Invention and Transfer of Climate Change Mitigation Technologies on a Global Scale: A Study Drawing on Patent Data," "Innovation in climate change technologies is highly concentrated in three countries-Japan, Germany, and the United States-which account for two-thirds of total innovations in the thirteen technologies" [23]. In this context, it can be argued that no initiative regarding transfer of clean technology could be successful without direct involvement of such countries.

On the other hand, TRIPs agreement sets minimum standards for the patent owners to exclude others for unauthorised manufacture, sell, and import of the innovation. Accordingly, patent protection is recognised as a ‘necessary evil’ [24] to foster innovation which have potential conflict with that of the climate change issues according to some of the literatures. Hutchison argued that extreme protection for the patent rights increase the cost of technology which carries no positive impact on the transfer and dissemination of technology to the developing world which is crucial to face climate related problems [25]. Other literature puts strong arguments in favour of safeguarding the patent rights discouraging the misuse of monopolies for instance, Compulsory Licensing under TRIPs where patent owners from developed world refuse such transfer to avoid competition. To ensure this, severe limitation has been placed under TRIPs which creates conflicts and a significant pathway of technology transfer has been locked. Consequently, the balance between rights and obligations has also become uncertain.

Aside from this, the rise of plurilateral negotiations inside and outside of the WTO framework, for instance, TRIPs plus, Trans Pacific Partnership Agreement (TPP), Trans-Atlantic Trade and Investment Partnership (T-TIP), Regional Comprehensive Economic Partnership (RCEP) etc create tension for the developing countries. In those agreements specially in the US-led TPP agreement, greater IP protection was negotiated which is a potential contradiction of clean technology transfer. The recent global climate scenario claims a mutual supportiveness among these two pillars of climate change viz., Trade and IPRs. In this framework, Weischer stressed that “The relationship between the trade and climate regimes is complex and has often been characterized by mutual avoidance rather than mutual supportiveness” [26].

THE NECESSITY OF CLIMATE NEGOTIATION UNDER WTO FRAMEWORK

Climate change issues have potential implications on trade and IPRs. Contrarily, trade and IPRs have likely impacts on climate change. Because of the effects of climate change, different vulnerable sectors such as fisheries, agriculture and forestry could be affected mostly in the LDCs which have potential impact on altering international trade pattern. Despite taking different climate related efforts in the last two decades, it was not able to address climate related issues effectively at different international level which posed severe challenges that needs immediate action under multilateral forum. With this in mind, negotiations under WTO to open the markets to climate friendly goods and services is significant.

Owing to the robust interconnection between climate and trade, the multilateral trade framework like the WTO has immense potential to create relevant tools to advance this issue (Leycegui and Ramírez, 2015). Although GATT/WTO has not mandated to accommodate climate change concerns, yet there are some potential scopes under different agreements such as, in the Agreements on Subsidies and Countervailing Measures (SCM). Some other exceptions under the 'Enabling Clause' and Article XXIV of GATT could be used to adopt 'climate club' or 'common minded countries' as an exception. Through this clubs, climate measures could effectively be enforced.

In addition, there are immense potential to use TRIPs as a means of clean technology transfer which has a direct positive impact to face climate challenges. There is an increasing consensus that TRIPs can play a significant role in adapting and mitigating climate challenges. Ruse-Khan argued in favour of smart use of flexibilities under TRIPs for technology transfer. Given the background, Wei Zhuang tries to answer the following two core questions in her renowned book: i) "whether and, if so, to what extent do the minimum IPR standards facilitate or inhibit innovation and transfer of ESTs"? ii) "whether and, if so, to what extent the TRIPs flexibilities can be interpreted to facilitate innovation and transfer of ESTs so as to address global climate change" [27]?

She also tries to explain how TRIPs can be used as an effective tool to facilitate innovation and Environmentally Sound Technology (ESTs) transfer through legal reforms which form part of the solution of the climate related crisis.

There are varied reasons for choosing WTO as an effective multilateral forum for discussions on climate change. First, there is a direct linkage between global trade and climate effect. According to the 'World Trade Statistical Review 2017', 164-member states of the WTO contributes 98.2% of global merchandise trade which has significant effect on climate change [28]. Moreover, it has an effective 'Dispute Settlement Mechanism' which is one of the core activities of the WTO including disputes related to IPRs. Additionally, WTO has enforcing capability which is significant for climate related actions. There are certain established flexibilities and principles under WTO such as compulsory licensing and the Most-Favoured Nation (MFN) principle which could be used as effective tools to address climate change.

With this view, to address the climate change under a multilateral trade framework like WTO is an overarching issue of our time. It has been realised after observing the slower progress of the global climate related undertakings that a dynamic climate related negotiation under multilateral trade and IP framework which have binding commitments is crucial to address this issue. It's a time demanded proposition that under the WTO purview the climate challenges could be better resolved.

ANALYSIS OF TRIPs: POTENTIAL LEGAL OPTIONS FOR CLIMATE ACTION

Minimum standards have been set out under TRIPs for the protection and enforcement of IPRs which neither covers climate change issues nor ensures effective technology transfer which is vital for addressing climate related challenges. In this context, the linkage between climate change and the IP particularly with patents for the development and dissemination of clean technologies through creating viable technological base specially in the LDCs should be addressed under TRIPs. Transfer of clean technology is crucial for adapting and mitigating climate change in the LDCs including vulnerable developing and small island countries. Recognizing this fact, different literatures stressed on the full implementation of Article 66.2 under TRIPs [29]. This article sets only the ground for technology transfer. According to this Article, developed countries are required to provide incentives to promote technology transfer to LDCs in order for them to establish a viable technological base. This article lacks from different points of view such as it has not defined two principle terms 'Technology Transfer' and 'Developed Countries' which is necessary for the decision that which countries are obliged and for what (Moon, 2008). Moreover, there is no special concern for clean technology transfer under this article. Although it was not mandated to transfer of clean technology, so far different countries mooted this issue to be discussed and incorporated under TRIP's purview.

Based on the obligation for developed countries under Article 66.2, the implementation concerns were discussed in Doha in 2001 and decided to develop a mechanism to monitor and implement the obligations under paragraph 11.2. TRIPs council decided in 2003, in accordance with this decision, that "developed country Members shall submit annually reports on actions taken or planned in pursuance of their commitments under Article 66.2 [30]." But, based on the submissions by the developed countries, different review focussed that this is disputed whether present mechanism is effectively contributing transferring technologies to the LDCs. As of October 2017, there are 145 submissions out of which only 17 are related to climate change which can be seen in Figure 1. From this figure it is also evident that developed countries have started their submission from 2009 which is not regular. In this regard, the LDCs response were not positive as the developed countries initiatives did not target LDC's need, hence the effectiveness of the mechanism of technology transfer was debated by researchers including the LDCs [31].

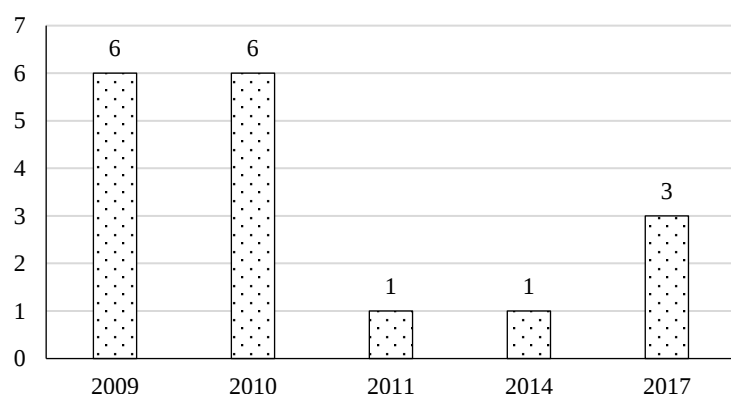


Figure 1. 'Developed Countries' Notification under Article 66.2 on Climate Change.

Source: WTO Database.

Following Figure 2 depicts country-wise notification under Article 66.2 on Climate Change which shows that very few developed countries like Australia, Japan, the EU, Canada, United States, Switzerland, Norway and New Zealand have participated in this initiatives of which most of them did not submit on a regular basis which means the obligation under Article 66.2 is not sufficient to cover climate related technology transfer under TRIPs. This situation poses some questions: Are the developed country members' measures under Article 66.2 promoting and encouraging transfer of clean technologies to the LDCs? What are the options under TRIPs that could be reformed to address the climate change issues?

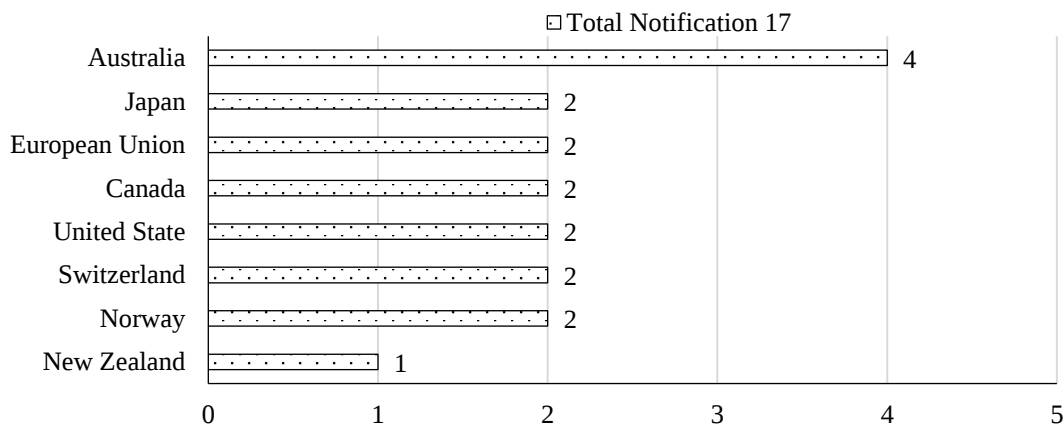


Figure 2. Country-wise notification under Article 66.2 on Climate Change.

Source: WTO Database

To answer these questions regarding the effectiveness of the Article 66.2 it can be argued that this article is not effective to ensure the transfer of environment friendly technologies to the LDCs. Moreover, there is a debate regarding the technology transfer to the developing countries which can be found in Ecuador's proposal. Moreover, the overpricing and monopoly of patent rights under TRIPs can hinder the transfer of clean technology. In this connection, Dr. Zhuang argued on the flexibilities regarding the limits of patent protection and the competition which can be used for the facilitation of innovation and the transfer of ESTs [32]. She also confirms the scopes of the TRIPs' "flexibilities" and proposes a "Doha-type Declaration on IPRs and Climate Change [33]." She recommended following international rules to licence IPR-protected ESTs "as possible pathways to improve the current international IP regime for facilitating innovation and transfer of ESTs" to overcome the inadequacy in TRIPs interpretation [34].

Paragraph 31 (iii) of the Doha Declaration mandates for the reduction or elimination of tariff and non-tariff barriers on environmentally sound goods and services (ESGs). But the ESGs were neither specified in the mandate nor the depth and pace of liberalisation were indicated. It's a matter of great expectation that the discussions on defining ESGs are continuing in a special session under the WTO Committee on Trade and Environment. Some developed members are trying to negotiate for the access of industrial goods while most other developing members are arguing for ESGs. Finally, WTO members, including Cuba, Australia, Switzerland, Canada, the European Union and the United States, have made proposals for further negotiation of environmental services in Special Sessions of the Council of Trade in Services [35].

This issue needs to be resolved within the WTO Committee and all members need to reach consensus as climate change is a common global crisis which should and could be addressed under this framework. During the UNFCCC Conference in Bali, the parties considered the liberalisation of ESGs as 'a potential deliverable from the global trading system' [36] for the international quest to adapt and mitigate climate change.

PROPOSED CONSIDERATIONS ADDRESSING CLIMATE CHANGE UNDER TRIPS

Above discussions claims to find the best possible mechanisms that WTO could adopt to ensure effective transfer of clean technologies under the TRIPs which could partly solve the climate crisis. Additionally, other initiatives for effectively addressing climate change issues was also considered. Given the background, the following proposal could be considered:

1. WTO Members are given certain rights for the protection of eligible inventions, but it does not allow inventors such protection for all jurisdictions which leaves options for keeping clean technology in the public domain.
2. There is a greater scope to cover climate change issue reforming patentable subject matter under Article 27 of TRIPs which sets three optional exceptions viz., *ordre public* or morality (Article 27.2), some medical related exclusions such as diagnostic, therapeutic and surgical methods (Article 27.3(a) and plants and animals, and biological processes (Article 27.3(b)). Clean technology could be inserted as fourth exception under this article.
3. The provisions under Article 31 of TRIPs that deals with "use without authorization of the right holder" meaning 'compulsory licencing' could better be used for the transfer of clean technology in the same manner as it is used for public health crisis.
4. Under Article 28.2 of TRIPs, patent holders have 'the right to assign, or transfer by succession, the patent and to conclude licensing contracts' [37] which means the owner can transfer his ownership or transfer it by inheritance or provide license to other person. Moreover, there is no constrain for joint ownership of IPRs under TRIPs which could be used as an option for developing clean technology.
5. There are certain provisions under TRIPs to address competition issues such as provisions under Articles 40 and 31(k). Additionally, Article 8.2 also provides some provisions regarding prevention of anti-competitive practices. These provisions can be used for acting against anti-competitive behaviour that is hindering the transfer and dissemination of clean technologies.

6. Climate issues should be considered as an emergency and it should be covered as an IPR exception under TRIPs. Where patent protection is widely accepted as 'necessary evil' protection of climate should also be treated as another 'necessary evil'.
7. It is significant to develop effective mechanisms for the clean technology transfer under TRIPs and to ensure Special and Differential Treatment(S&D) for the developing members. With this, special attention is needed along with a follow-up communication. Full implementation of Article 66.2 as stressed by different researchers should thus be ensured.
8. One of the alternative mechanism to solve this crisis could be 'Green TRIPs++' through which the original TRIPs agreement could be revisited for exploring the approach as used to solve the public health problem for LDCs through different exceptions. In this case climate change effects such as drought, floods, and deforestation can be considered as exception to allow LDCs to get access to clean technology from the developed world (Saner, 2013).
9. Definitional clarity of the key terms for instance 'Environmentally Sound Technology(ESTs)' and 'Developed Country' under this agreement is significant. Hence, these terms should be clearly defined for the purpose of ensuring what should be transferred and who are obliged to transfer such technologies.
10. For enhancing transfer of such technology, it requires necessary actions both from suppliers as well as technology recipients. The supplier's actions include satisfactory incentives, technology transfer regulations, developing collaboration for R&D and finance for technology transfer whereas from the recipient's point of view it requires strengthening the domestic innovation systems including absorptive capacities.
11. Under TRIPs agreement, mechanisms like Carbon Trading could be introduced for decreasing carbon emission. Carbon trading is in the central of the EU's efforts for slowing down the climate change which can be considered. Although this mechanism is questioned for its difficulties and corruption, yet some countries for instance China and Brazil continue to pursue this for tackling increased emissions. Alternatively, the Clean Development Mechanism (CDM) under the Kyoto Protocol (Article 12) that stimulates emission reductions and help ensure sustainable development could be introduced.
12. Professor Carlos Correa suggested the governments to support 'the development of technologies as a public good' [38]. He has necessitated patent offices for applying the maximum standards in the valuation of patent application. Additionally, he stressed on the use of compulsory licencing for the access of patented inventions regarding clean technology [39].
13. Frederick Abbott has noted a range of options- including patent pools, compulsory licensing, voluntary licensing, government use, and joint ventures. He stressed on the necessity of considering other issues that can stop the access to clean technologies [40].
14. Climate club could be introduced under TRIPs. Considering the fact that, seventy five percent of world emissions has been contributed by only 12 to 15 countries (Victor, 2015), it can be expected that climate clubs consisting of some of those countries may impact climate action positively.

ALTERNATIVE INITIATIVES TO ADDRESS CLIMATE CHANGE

There is no denying the fact that creating viable technological base through developing R&D in the developing countries is a must for reducing climate vulnerability. Beside the scopes under TRIPs agreements, other alternative options should be considered as suggested in different literatures. In this respect, Professor Rimmer suggested to include 'technology mechanisms, knowledge-sharing, public sector licensing, patent pools, and open innovation' [41]. He referenced the IPCC that supports 'knowledge sharing, coordinated or joint research and development of climate-change-mitigating technologies, technology transfer, and technology deployment policies' [42]. Moreover, he mentioned Richard Newell, Jerome Reichman, Arti Rai, and Jonathan Weiner for their recently reviewed alternatives for IPRs and clean innovation [43]. Additionally, within the WTO framework to prevent trade, IP and climate collisions different alternatives should be considered which includes free trade of green products, environment-friendly government procurement and harmonization of standards etc.

POTENTIAL CHALLENGES FOR THE TRIPS REFORM

Addressing the climate change under new multilateral framework will unquestionably face different financial, technical, social and political challenges. The degree of challenges will mostly depend on the political will including relevant legal and domestic policies of the concerned member countries. It should be kept in mind that adjusting, amending or reforming rules under the WTO is a complicated procedure due to the nature of the negotiation and the decision-making processes. Despite this complicated process, TRIPs agreement was amended on 23 January 2017 for the first time [44] with a view to ensuring access to essential medicines at an affordable price for the vulnerable developing countries lacking manufacturing capacity. From this amendment it reveals the fact that under the framework, amendment or reform is not an easy task as decisions under WTO have been taken based on the consensus of the member states which is really challenging due to the different interests of the members.

Keeping in mind the previous amendment, the present potential reform challenges have been analysed in this section. First, a general rule reveals that “The WTO shall continue the practice of decision-making by consensus ... where a decision cannot be arrived at by consensus, the matter at issue will be decided by voting [45].” Most of the vote is considered as “one country, one vote” basis. Moreover, in case of special and differential waivers including certain interpretations, different decision-making process should be followed based on the Article IX of the Agreement Establishing the World Trade Organization [47]. If a consensus is not possible in case interpretations and waivers, decisions could be taken based on three-fourths majority of the Members. However, usually member countries take waiver decision based on consensus (WTO 2012). Additionally, such waivers have been given for some exceptional circumstances and for a limited period of time for instance, waiver for public health concern in the developing countries. There is also an annual review mechanism before the waiver is elapsed.

Second, the amendment procedure of the WTO legal texts is quite complex as it requires prior approval through consensus of the Ministerial Conference. Only in the exceptional case, it could be approved by a two-thirds majority which sometimes delayed the reform process which has been observed in the first amendment. Moreover, regarding the first TRIPs amendment it was argued by different researchers that various preconditions have been attached with this waiver which will create unnecessary barrier for effectively accessing the waiver. ‘Prior negotiation for a voluntary licence’ could be a suitable example. With this, this amendment is widely criticised as a ‘rare negotiation win’ for accessing essential medicines which would not fulfil the expected outcome owing to the overly cumbersome conditions attached to it (Abbas and Shamreeza, 2017).

Third, various processes need to be followed under Article X of WTO for obtaining the acceptance from the Members based on the Agreement that is affected through the amendment. For instance, if the amendment relates to Article IX or X of the WTO Agreement, Articles I and II of GATT 1994; Article II:1 of GATS [General Agreement on Trade in Services], or Article 4 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), it requires the acceptance of all Members (Article X:2 of the WTO Agreement) [48].

Fourth, defining ‘Environmentally Sound Goods (ESGs)’, ‘Clean technology’ and ‘developed country’ is another challenge for WTO as there is a lack of globally accepted definition of these terms which are essential for negotiations. For an example, in the negotiation under TRIPs council, the ESGs posed challenges among the delegates regarding the scope. In this connection different approaches have been focused. In this discussion, there was a disagreement on the ‘dual use’ goods which divided the members. Many developing countries are the proponents of ESGs. They are more concerned about cutting higher tariffs for such goods. On the other hand, proponents of ESGs such as Japan, Canada and the EU etc., argued that the liberalisation benefits of such goods would be restricted if it was limited for environmental purposes. Fifth, the amendments of the TRIPs under Article 71:2 can be approved by the

Ministerial Conference without any further legal or administrative procedure. Finally, it can be observed from the above discussion that the reform procedure in the WTO is complex which may create unnecessary delay resulting uncertainty regarding the reform, yet it is hopeful that the reform is impossible. At this point, toward reforming, interpreting, or amending TRIPs provisions seems difficult but crucial. For that reason, a pragmatic approach and greater consensus would be better to address climate change under TRIPs.

CASE STUDY

There is no specific case which is directly related to the climate change under WTO dispute settlement body. But, there are some WTO cases which are related to environmental issues. As there is no specific agreement covering environment, henceforth these cases are discussed under different WTO agreements such as SPS and TBT. For example, US -Tuna II (Mexico) case (DS381) [49] was discussed under Art. I, III of GATT 1994 and Art. 2, 5, 6, 8 of TBT while EC-Asbestos (DS135) [50] case was discussed under Art. III, XI, XXIII, XXIII:1(b) of GATT 1994, Art. 2, 3, 5 of SPS and Art. 2 of TBT.

CONCLUDING THOUGHTS

There are scopes and challenges to address climate change crisis under GATT/WTO regime specially under TRIPs agreement. From this basis, WTO cannot and should not avoid its role to incorporate this global concern under its framework. Considering TRIPs amendment regarding public health as a success story, WTO can play an active role to take initiative for incorporating climate friendly legal options. Most importantly, this multilateral forum can create an enabling environment under TRIPs for the development and diffusion of clean technology towards adapting and mitigating climate crisis. Although it is challenging for the WTO to keep the balance between rights and obligations, yet utilizing the prior experience of amendment, it may consider climate change as a special circumstance and accordingly take the same reform initiatives to face this challenge. Without effective amendment, access to clean technology at an affordable price may remain as a 'Pandora's box' for the susceptible countries. Even though, there is no specific constrain under TRIPs for wider diffusion of clean technologies, yet the provisions should be more specific. These scattered provisions may be reformed through an amendment to better address climate change under TRIPs. At the same time, scopes under GATT/WTO framework should also be exploited to expedite the climate change action.

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