

# **CLIMATE CHANGE IMPACTS: GENERATING PRIVATE SECTOR FINANCING IN PAKISTAN**

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## **Executive Summary**

Extreme climate changes in Pakistan are inevitable in the coming decades. These climate changes have the potential to cause mass migrations and severe losses on Pakistan's exports, infrastructure, and human security. To tackle these challenges, there is a need to generate financing from the private sector in such a way that private sector earns profit on their investment in an ecologically beneficial manner rather than investing on projects which are harmful to the environment. For this purpose, green bonds, sustainability linked bonds, conservation financing, public – private partnerships and investments in agriculture as well as renewable energy sectors are some of the financial pathways to generate financing in Pakistan. However, these routes shall require extensive changes in Pakistan's legal apparatus from both the financial perspective as well as from the environmental milieu.

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## **Introduction**

The incidence of climate changes in the world pursuant to the adoption of Western capitalism for several centuries has a sarcastic lamentation on human nature. It is like after climbing all the stairs, the hungry and the intellectually curious friend realized that the fellow he perceived as lazy and unimaginative, was surprisingly right. There was no point in climbing all the stairs because there was nothing special at the top of the stairs. Greek myth of Pandora seems to have unique wisdom. Human desire to move, and to conquer more and more; extract pleasure and comfort from the labour of others and from the Earth's natural resources, and to admire whatever is considered powerful and glamorous might have perils. The harm is that it can ruin their own collective survival. To reduce the dangers of the globalization and capitalism which destroyed their home, the only palatable solution within the framework of the current global economic system demands private investment. In this context, the aim of this policy brief is to explore various options for generating private investment in Pakistan to combat the perils of climate change.

## **Impact of Climate Changes in Pakistan**

Pakistan is one of the lowest emitters of carbon emissions.<sup>1</sup> Despite the country's low carbon footprint, Pakistan has faced various climate catastrophes such as Peshawar Tornado in 2015 which killed 35 human beings while Karachi heat wave resulted in the death of 1300 people in a week in 2015.<sup>2</sup> Between 1998 and 2018, Pakistan suffered casualties of 10,000 lives and losses amounting to \$4 billion from 152 environmental catastrophes.<sup>3</sup> Due to many floods and landslides, the incidental impacts due to these climate changes in terms of displacement of communities, land erosions, energy losses and communication disruptions hamper the economy of the country.<sup>4</sup> The result is the reduction in profits which reduces profits on crop production.<sup>5</sup> Moreover, the variations in the temperature significantly impact export economy, food security and foreign exchange reserves. For instance, minimum

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<sup>1</sup> Nationally Determined Contributions 2021 (Government of Pakistan, 2021), Page 12

<sup>2</sup> Robert F Ichord, Transforming the Power Sector in Developing Countries: Geopolitics, Poverty and Climate Change in Pakistan, *Atlantic Council* (2020)

<sup>3</sup> Kirthisari Rajatha Wijeweera, 'Financing Climate Action in Pakistan' (*UNDP*, 24 June 2023)

<sup>4</sup> *Ibid*

<sup>5</sup> Vaqar Ahmed and Asif Javed, 'National Study on Agriculture Investment in Pakistan', (*SDPI*, 2016) pp.1

temperature during February and November impacts detrimentally on the wheat production while it is inversely linked to rainfall in March. Cotton production is also hampered negatively to the precipitation as almost two million bales of cotton were destroyed in past in Pakistan due to climate change impacts.<sup>6</sup> This caused import of cotton and less exports which further aggravated the balance of payment crisis.<sup>7</sup>

Despite these harrowing conditions, 300% growth is projected in greenhouse gas (“GHG”) emissions in Pakistan between 2015 and 2030 due to the anticipated economic growth rate in this time period.<sup>8</sup> Pakistan intends to reduce up to 20% of its projected GHG emissions by 2030 which shall require international financing.<sup>9</sup> This reduction in emissions is set to be achieved through a range of measures from investing in renewable energy sector to agriculture sector.<sup>10</sup> Therefore, it is no surprise that Nationally Determined Contributions 2021 (“NDC”) states that Pakistan will require \$101 billion by 2030 only in terms of energy transition.<sup>11</sup> For this purpose, it is important that private sector bridge the gap between the ambition and realization of achieving funds. Private financial intermediaries need to invest in mitigating and adapting the impacts of climate change in a way in which the private financial actors assume the risk of investment as opposed to the popular development finance. For this purpose, it is important to examine various financial mechanisms which are helpful in bringing private investment into the country.

## **DISCUSSION**

### **Debt – for - Nature Swap**

Debt – for - Nature Swap is one of the most innovative ways for generating funds for both the adaptation and mitigation climate change projects. It has generated almost 1.1 billion USD and is instrumental in generating the space for funding the green initiatives.<sup>12</sup> Such swaps are generally ‘triangular arrangements’ in which the debtor economy can sell its debt to a development agency at a discounted price. The agency

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<sup>6</sup> Ibid, pp 14.

<sup>7</sup> Ibid, pp.14.

<sup>8</sup> Ibid (n.3)

<sup>9</sup> Ibid (n.3)

<sup>10</sup> Ibid (n.3)

<sup>11</sup> Ibid (n.3)

<sup>12</sup> Ibid (n.3)

later negotiates repurchasing value with the creditor economy.<sup>13</sup> The difference between the old debt and new debt is used to finance the investment in climate change projects.<sup>14</sup> Such arrangements were especially beneficial for countries like Seychelles which used such financing to protect 30% of its waters.<sup>15</sup>

Debt – for - Nature provides the space for the country’s exchequer to invest in projects which are geared towards the larger goal of reducing climate change impacts as many times external public debt service is greater than expenditures of many essential services which will buffer the impacts of climate change. A United Nations Development Program (“UNDP”) research considers that US\$1.1 trillion is spent on debt service payments by developing countries in 2021.<sup>16</sup> The fiscal space allows the country to improve credit ratings which help the private sector to invest in bonds and in climate adaption sectors due to the betterment in financial atmosphere.<sup>17</sup> It must be noted that the congestion in fiscal space strangulates the ability of poor countries like Pakistan to implement their NDCs which further impact the ability to attract private financing in combatting climate change projects. <sup>18</sup> Most of the private investments in developing countries are intrinsically linked to the political and macroeconomic milieu of the country. As a result, private investment in these countries is slow and difficult to obtain, especially in the adaptation aspect of climate change impacts due to their high-risk levels and long-term returns.<sup>19</sup>

The way of operation of debt – for – nature swaps can also be in a way in which the guarantee facility for ‘Green and Inclusive Recovery Fund’ managed by an institution such as the World Bank can help to provide credit enhancement for new bonds which shall be swapped with private creditors for old bonds with significant reductions in debt. This shall reduce interest rates on new bonds due to the better credit ratings as missing payments to private creditors shall result in exposing the collateral of the Fund

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<sup>13</sup> Muhammad Umar Ayaz, Sajid Amin Javed and Hina Aslam, ‘Debt Swap for Green Recovery: Options, Challenges and the Way Forward for Pakistan’ (2022) SDPI Working Paper # 196 pp. 7. <<https://sdpi.org/assets/lib/uploads/Debt%20Swap%20for%20Green%20Recovery%20Options,%20Challenges%20and%20the%20Way%20Forward%20for%20Pakistan.pdf>> accessed 17<sup>th</sup> July 2023

<sup>14</sup> Marcos Chamon, Erik Klok, Vimal Thakoor and Jeromin Zettelmeyer, ‘Debt – for – Climate Swaps: Analysis, Design and Implementation’ International Monetary Fund Working Paper 22/162, pp 6.

<sup>15</sup> Ibid pp 7

<sup>16</sup> Ulrich Volz and others, ‘Debt Relief for Green and Inclusive Recovery: Securing Private Sector Participation and Creating Policy Space for Sustainable Development’ (June 2021) Boston University Report, pp 8.

<sup>17</sup> Kristalina Georgieva, Maros Chaman and Vimal Thakoor, ‘Swapping Debt for Climate or Nature Pledges Can Help Fund Resilience’ (IMF Blog, 14<sup>th</sup> December 2022) < <https://www.imf.org/en/Blogs/Articles/2022/12/14/swapping-debt-for-climate-or-nature-pledges-can-help-fund-resilience> > accessed 17<sup>th</sup> July 2023

<sup>18</sup> Ibid (n.14) pp 19

<sup>19</sup> Chetan Hebbale and Johannes Urpelainen, ‘Debt – for – adaptation swaps: A financial tool to help climate vulnerable nations’ (Brooking, March 21, 2023) < <https://www.brookings.edu/articles/debt-for-adaptation-swaps-a-financial-tool-to-help-climate-vulnerable-nations/> > accessed 17<sup>th</sup> July 2023

to the private creditors. The debtors shall then pay the installments to the Fund. The debt relief shall be with the promise from the governments that there shall be 'Green and Inclusive Recovery Strategy' which aligns with the policies of Sustainable Development Agenda and the Paris Agreement.<sup>20</sup>

### **Investments through Financial Schemes**

Green bonds are also an interesting way to create private investment. The Securities Exchange Commission of Pakistan ("SECP") considers that proceeds of green bonds are exclusively for the green projects which reduce the impact on environment and the green projects should provide clear environmental benefits.<sup>21</sup> The majority of these bonds are designed in such a way that failure to repay the principal amount on maturity would make the entire assets liable for repayment as collateral. Most of the proceeds from these bonds are reserved for green projects which include renewable energy, urban and mass transit, green buildings, and marine protection.<sup>22</sup> Social bonds are also a similar specie to the green bonds as they generate funds for existing projects through same financial mechanisms but for social purposes. It must be noted that the impact of climate changes on low – income people is far more than rich people. For instance, extreme weather patterns kill 130 people for every one million people in low-income countries. In high – income countries, it is 18 per one million.<sup>23</sup> Thus, projects in relation to social bonds include access to essential services which reduce socio – economic disparity which in turn reduces climate change impacts and the assets of the company remain separated from the collateral on maturity. An interesting aspect of social bonds is that the investors link the portfolio with compliance with sustainable development goals which range from zero poverty and hunger to measures such as diminishing climate change as well as increased wages and safety nets. This can help countries like Pakistan which are suffering from class apartheid to tap into the not – for – profit commercial investments which improve the supporting factors such as combatting inequality to counter the impacts of climate change.<sup>24</sup> Similarly, sustainability bonds are a mix of green bonds and social bonds which generate finance

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<sup>20</sup> Ibid (n.14) pp 4

<sup>21</sup> Guideline (1)(iii) (iv), 5 (3), SECP Guidelines Issuance of Green Bonds/Sukuk

<sup>22</sup> Ibid (n.3)

<sup>23</sup> Delia Paul, 'Merging the Poverty and Environment Agendas' (*IISD*, February 2021) < <https://www.iisd.org/system/files/2021-02/still-one-earth-poverty-and-environment.pdf> > accessed 17<sup>th</sup> July 2023

<sup>24</sup> 'Promoting Social Bonds for Impact Investments in Pakistan' (*Asian Development Bank*, May 2021) < <https://www.adb.org/sites/default/files/publication/703076/social-bonds-impact-investments-asia.pdf> > accessed 17<sup>th</sup> July 2023

for projects which are both social and green in nature. In this regard, an interesting specie of sustainability bonds are sustainability linked bonds which allows the structuring of the coupon rate to be linked with the achievement of the performance indicators.<sup>25</sup>

Blended finance is also an excellent way to attract private finance in such a way that finance is strategically projected.<sup>26</sup> Blended finance creates an enabling environment in which transactions are 'investment ready' in terms of design staging and assistance grants. Most of the blended finance facilitate access to capital through reduction of interest rate of financing and covering risks for certain investors through protective measures to shield losses for such investors. However, it is important to mention that technical assistance is plugged in the blended finance schemes to improve returns on investments.<sup>27</sup> Blended finance can help the lowering of commercial interest rates in case of private sector investment especially considered if the 'Green Climate Fund' or the public – sector invest in the equity of the project. Similarly, if 'Resilience and Sustainability Trust' of IMF invests in a project, it improves private financing as IMF provides surveillance, risk assessments and other climate diagnostic tools. Moreover, if public money is invested in climate funds in which risk is spread on the lower tranches of the Fund in relation to public money, private capital can be coaxed to acquire an interest in senior tranches.<sup>28</sup>

Conservation finance is also an innovative method to raise private investments as they are essential for generating positive conservation benefits. Conservation projects raised USD 1,042 billion in investments between 2015 and 2019.<sup>29</sup> Areas in which there are extensive supply chains in manufacturing products are specifically targeted with investments in sustainable supplies amounting to 40% of all private investments.<sup>30</sup> In this regard, RRG Capital Management's Fund is a very good example which designed Sustainable Water Investment Fund (SWIF) which invests in regions which are arid and semi – arid with most vulnerability to trends like climate

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<sup>25</sup>Ibid (n.3)

<sup>25</sup>Zahid Majeed and Abdullah Anjum, 'Pakistan's Options for Climate Finance' *TNS* (Lahore, August 23, 2020)

<sup>26</sup>'How can Blended Finance help fund climate action and development goals' (*LSE*, 30<sup>TH</sup> November 2020) < [How can 'blended finance' help fund climate action and development goals? - Grantham Research Institute on climate change and the environment \(lse.ac.uk\)](#)> accessed 18<sup>th</sup> June 2023

<sup>27</sup> Juliette Baralon and others, Conservation Finance 2021 An Unfolding Opportunity (CPIC, September 2021)

<sup>28</sup>Bo Li and other, 'How Blended Finance Can Support Climate Transition in Emerging and Developing Economies', (IMF Blog, 15<sup>th</sup> November 2022) <https://www.imf.org/en/Blogs/Articles/2022/11/15/how-blended-finance-can-support-climate-transition-in-emerging-and-developing-economies> accessed 17<sup>th</sup> July 2023

<sup>29</sup> Oliver Gordon, 'The dawning of the conservation finance market' (*uxolo*, September 2021)< <https://www.uxolo.com/articles/7062/The-dawning-of-the-conservation-finance-market> >

<sup>30</sup> Ibid (n.25)

change. The aim is to create resilience for agriculture production and water availability. SWIF acquires land to improve surface water and agricultural management in such a way that water needs are met in a reasonable manner for the local population. The success of this model is demonstrated by six projects on different continents of the world. For instance, in Chile, first conservation easements in the upper watershed of the same basin protects groundwater and surface water supplies to conserve agricultural resilience. In this way, both the revenue generation increases as well as there are positive environmental impacts.<sup>31</sup>

### **Investments in Private Energy Sector**

It is encouraging to note that private actors have provided 49% of annual climate finance.<sup>32</sup> Almost 75% of that private investment which amounted to almost USD 310 billion per year was expended on renewable energy.<sup>33</sup> Moreover, 67% investment of total climate financing in renewable energy is via private investment.<sup>34</sup> Therefore, in terms of private financing for renewable energy, it is very important to reduce risks on private finance in this sector through blended finance and to use guarantees for renewable energy. One example of private finance in renewable energy is the use of 'Interact Climate Change Facility' which 'pools' finance from various development financial institutions to develop a mechanism in which these institutions jointly invest in renewable energy projects. Similarly, grant schemes which match with the innovative companies with no access to capital are also created. An example of such a type of financing is the creation of a special window on renewable energy within the Africa Enterprise Challenge Fund. This Fund provides capital through a competition of projects which is best in terms of low – cost energy with access to small farm holders to energy services.<sup>35</sup>

Financing renewable energy is very important to create energy security as it reduces current account balance and makes the country immune from the shocks in the international market. In light of these benefits of renewable energy, Pakistan does provide a financing environment to renewable energy projects with same ease as non

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<sup>31</sup> Ibid (n.25)

<sup>32</sup> Ibid (n.3)

<sup>33</sup> Ibid (n.26)

<sup>34</sup> Ibid (n.26)

<sup>35</sup> 'Private Sector Engagement to Address Climate Change and Promote Green Growth' OECD Policy Brief < <https://www.oecd.org/dac/peer-reviews/Policy-Brief-4-Private-Sector-Engagement-to-Address-Climate-Change-and-Promote-Green-Growth.pdf> > accessed 17<sup>th</sup> July 2023

– renewable energy projects as ‘one – buyer, take – or – pay’ electricity procurement model protects power companies who aim to venture into non-renewable energy generation.<sup>36</sup> One of the benefits of renewable energy is observed that there is no need to upgrade the electricity distribution system.<sup>37</sup> However, most of the renewable energy products are relatively small in size which increases the price and inelasticity of the transaction costs for such projects and has low – gross returns.<sup>38</sup> Subsidies are also continuously provided to fossils fuels and the development of renewable energy shall continue to remain hindered. There is a lack of full cost pricing in traditional sources of energy as the environmental costs and high discount rates disincentivize renewable energy. This is primarily due to the fact that there is high capital cost for erecting renewable energy projects but there is less cost for running the projects.<sup>39</sup> Moreover, the monopoly of state over electricity transmissions and distribution also restricts against control in private equity investment.<sup>40</sup>

Public - Private Partnership is also one of the most important ways to generate private financing in renewable energy in countries like Pakistan. Pakistan has considerable experience in working on PPP projects with great majority of 102 projects for USD 29 Billion are in electricity sectors.<sup>41</sup> Pakistan has reasonable score in PPP rating with average above South Asia and at par with high – income countries which have successfully attracted investment in renewable energy.<sup>42</sup> However, the way to reach foreign PPP sponsors is to improve the country’s risk rating of rule of law. If such ratings are better, the credit rating in relation to the cost of debt is low for a PPP project as well as the cost of services such as electricity. For this purpose, special emphasis is generally required on confidence in contract enforcement, property rights and physical security.<sup>43</sup>

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<sup>36</sup> Sadia Malik, Maha Qasim and Hasan Saeed, ‘Green Finance in Pakistan: Barriers and Solutions’ (2018) ADB Working Paper Series No 880 <<https://www.adb.org/sites/default/files/publication/460346/adbi-wp880.pdf>> accessed 17<sup>th</sup> July 2023

<sup>37</sup> Ibid

<sup>38</sup> Ibid

<sup>39</sup> Ibid

<sup>40</sup> Ibid (n.26)

<sup>41</sup> William Mako and others, ‘Recent Developments in Climate Finance: Implications for Pakistan’, (*International Growth Center*, May 2022)

<sup>42</sup> Ibid

<sup>43</sup> ‘Recent Developments in Climate Finance: Implications for Pakistan’ (2022) CDPR, Policy Brief - 2107 <<https://cdpr.org.pk/wp-content/uploads/2022/08/Recent-Development-in-Climate-Finance.pdf>> accessed 17<sup>th</sup> July 2023

## **Investments within Agriculture Sector**

Pakistan provides 56.6 billion relief to agriculture sector which are aimed at subsidies on fertilizers and pesticides.<sup>44</sup> There is a problem of huge amounts of money poured into the sectors which are environmentally damaging. Subsidies are provided to unsustainable use of freshwater and soy production in Amazon. An estimate suggests that at least 1.8 trillion USD of environmentally harmful subsidies create incentives for overproduction of crops and extraction of fossil fuels.<sup>45</sup> The harmful impact of subsidies was best manifested in Malawi where the government spent 60% of agriculture budget on farming subsidies which resulted in decrease in the reduction of maize yield over time.<sup>46</sup> Therefore, holistic strategies are important for adaptation techniques like the process of conservation of moisture through deep plowing. In this regard, financing is important in areas which support this transition such as education. For instance, increase in number of years of schooling increases by 1% of transition to deep plowing.<sup>47</sup> Similarly, the presence of property such as tractors and access to credit are also important for farmers to undertake deep plowing.<sup>48</sup> It must be noted that there is a need of private investment in both climate change mitigation and adaptation techniques. However, climate change mitigation receives more investment than adaptation investment as most of the projects under the ambit of mitigation can receive funding more easily as these projects are more involved in the cash flow generating activities.<sup>49</sup>

There is also a lack of clarity in Pakistan in areas of climate governance in terms of provinces and federation. After the 18th amendment in the Constitution of Pakistan 1973, the Federal Ministry of Environment was put under provinces and the mandate of Pakistan Environmental Protection Act (PEPA) 1997 was placed under the new Ministry of Climate Change at federal level. This created major issues in terms of roles and responsibilities between Federal Government and Provincial Governments, especially for the agricultural sector and water sector. Thus, most of the governance

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<sup>44</sup> Aamir Saeed, 'Pakistan approves agricultural relief package to support farmers' (Arab News, May 13, 2020) < <https://www.arabnews.pk/node/1674226/pakistan> > accessed 17<sup>th</sup> July 2023

<sup>45</sup> Patrick Greenfield, 'Harmful subsidies; why is the world still funding the destruction of nature' (The Guardian, 17<sup>th</sup> February 2022) < <https://www.theguardian.com/environment/2022/feb/17/harmful-subsidies-why-is-the-world-still-funding-the-destruction-of-nature-aoe>>

<sup>46</sup> Ibid

<sup>47</sup> Khuda Bakhsh and Asif Kamran, 'Adaptation to Climate Change in Rain – Fed Farming System in Punjab, Pakistan' [2019] International Journal of the Commons, 833, 841

<sup>48</sup> Ibid

<sup>49</sup> 'Pakistan Urgently Needs Significant Investments in Climate Resilience to Secure its Economy and Reduce Poverty'; (*World Bank*, November 10, 2022)

issues pertain to adaptation strategies in terms of climate change. It must be noted that the Framework for Implementation of Climate Change Policy 2013 (“FICCP”) allows only deficiencies in relevant federal legislations to be removed through a process of removal and identification. In this regard, developments at the provincial level are poor as the Federal Ministry of Climate Change has no cover and this deters implementation of FICCP’s water sector adaptation strategies as there are no links between the federal levels and provincial levels. The gap between provincial and federal domains is best manifested by the Punjab Agriculture Policy (2017) which considers that “On-farm Water Management (OFWM) section of Punjab Agriculture Department has initiated several on-farm techniques for the conservation and efficient utilization of water.”<sup>50</sup> The purpose of the OFWM is to optimize per unit of water to reduce water scarcity. However, the water subsidies at the same provincial level reduce the effectiveness of OFWM techniques and there was no guidance to the province from the federal level. The problem further emerges when there is total lack of clarity in terms of provincial and federal domains in terms of larger engagement on water sector ownership.

### **POLICY RECOMMENDATIONS**

- 1) Pakistan needs to increase the advocacy for the debt - for - climate swaps. These swaps must ensure that funds generated are invested in particular projects rather than the entire debt services. Moreover, the debt swaps should also ensure that the commercial or not – for – profit entities buybacks the debt as it will be provided to them at a lower interest rate than Pakistan.<sup>51</sup>
- 2) Government of Pakistan must emphasize in negotiations with IMF that Debt Sustainability Analysis conducted by IMF need to account for spending investments for climate resilience and that restructuring need to incentivize the private investment required for debt – for – nature swaps.
- 3) For debt – for – climate swaps, there is a need to link the amount of financial relief with the standardized climate performance indicators.<sup>52</sup> Moreover, these

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<sup>50</sup> Kanwar Muhammad Javed Iqbal and Muhammad Irfan Khan, ‘Climate Governance: Implementing Water Sector Adaptation Strategies in Pakistan,’ Policy Perspective Vol 15, No. 3 (2018) pp 139-155

<sup>51</sup> Ibid (n.17), pp 21

<sup>52</sup> Ibid (n.17) pp 22

private creditors involved will also use the amount of the finances to offset their carbon footprint. A successful example in this regard was observed in an agreement between Spain and Uruguay in Clean Development Mechanism (CDM) which helped Spain to earn certified emission reduction through debt for wind power swap.<sup>53</sup>

- 4) Debt – for – nature swaps, if executed in a way in which debt – for – adaptation projects are provided importance, shall help the countries to improve macroeconomic indicators to generate private investment for long term and high-risk projects. They will also allow the governments to invest in adaptation projects in their own currencies which shall be cost – effective and will help the countries to insulate themselves from the inflation trends in global liberal market.<sup>54</sup>
- 5) There is a need to create “Environmental Social and Governance (ESG)” standards which provides guidelines for private sector financing. This ESG profile clearly elucidates the standards and goals especially in terms of the outcomes of mechanisms of green financing and the expected returns on long – term high risk projects. <sup>55</sup>
- 6) It is important that harmful subsidies in agriculture, forestry and fishing are reduced as there is need to reduce incentives which harm biodiversity. To achieve this model, legal frameworks are required which help the private actors to achieve these targets as demonstrated through Columbia’s biodiversity offset regulations. Under these regulations, any infrastructure project which has the potential to harm the environment such as mining, oil, or gas must also ameliorate environmental impacts through restoration and protection projects.<sup>56</sup> There is also a need to redirect subsidies only to the small farmers who support low – carbon agriculture and agroforestry which in turn could improve soil quality and ecological health of land.<sup>57</sup>
- 7) State Bank of Pakistan must focus, in addition to green bonds, on issuance of sustainability linked bonds that tie up the bond issuance proceeds to climate-friendly investments. The issuance of bonds must be in a way that private

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<sup>53</sup> Ibid (n.17) pp 19

<sup>54</sup> Ibid (n.19)

<sup>55</sup> Ibid (n.13) pp 18, 20

<sup>56</sup> Ibid (n.26)

<sup>57</sup> Ibid (n.45).

companies be engaged in order to reach out to public for bonds.<sup>58</sup> This is line with own policy of the Government of Pakistan (“GoP”).<sup>59</sup> Moreover, there is a need of refining domestic guidelines for green bonds and provide clear regulations for other types of bonds mentioned *supra* especially the social bonds need to be specifically mentioned in the guidelines.<sup>60</sup> GoP need to relax requirements on the sponsors and regulators of green bonds as the SECP Green Bond Guidelines provide considerable leeway to SECP to assess the ‘greenness’ of the project. There is a very high threshold in the SECP Green Bond disclosure requirement.<sup>61</sup>

- 8) It is important that Pakistan convert Nationally Determined Contributions 2021 (NDCs) into a policy that provide specific projects for investments and the amount of emissions which shall be reduced through these projects. <sup>62</sup>
- 9) The FICCP supports private sector for climate financing particularly through Public-Private Partnership (PPP) models. The China-Pakistan Economic Corridor (CPEC) has the potential to support projects related to renewable energy, marine water, and coastal ecosystem management for which private sector must be engaged through PPP model. However, for this purpose, jurisdiction in terms of provinces and federation needs to be outlined as water sector is a provincial subject while the success of the project is linked with ‘cross-sector input’ for climate adaptation at provincial level as there is very less financial allocation at provincial level.<sup>63</sup> Public – Private Investment is essential for financing large scale projects as public and private sectors can pool the resources to effectively engage the strengths of each other. These projects can effectively ensure the construction of projects which are climate resilient. For instance, hydropower projects shall be designed which can cater to all kinds of water flows in future.<sup>64</sup> To excel in PPP projects, more exchange of information between countries is especially helpful as countries excel in special aspects of

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<sup>58</sup> Ibid (n.3)

<sup>59</sup> ‘National Climate Change Policy’ (2021) Ministry of Climate Change, Government of Pakistan, Policy < <https://mocc.gov.pk/SitelImage/Policy/NCCP%20Report.pdf>, > pp 46

<sup>60</sup> Ibid (n.26)

<sup>61</sup> Ibid (n.43)

<sup>62</sup> Ibid (n..43)

<sup>63</sup> Ibid (n.47)

<sup>64</sup> ‘Energy and Power PPP’ (2022) World Bank Editorial < <https://ppp.worldbank.org/public-private-partnership/sector/energy> > accessed 17<sup>th</sup> July 2023

PPP arrangement. For instance, Australia excels in project preparation while China is expert in procurement.<sup>65</sup>

- 10) For the purpose of attracting investment in large scale renewable energy, the government must provide grants to cover costs for these projects. If the projects are successful, the government can convert these grants into an equity stake. The profit can then be further re – routed into further grants. Converting small scale renewable energy projects into larger projects can help to tap the private sector investment from International Finance Corporation (“IFC”) of World Bank as IFC reportedly does not consider projects smaller than 20 million USD.<sup>66</sup>
- 11) Better ownership models are also quite effective in creating transmission systems and attracting investment. In this model, revenues of the project are paid in such a way that clients such as generators, large consumers, and distribution utilities put a proportion of their share in the payment of revenue in accordance with their energy consumption and time of maximum demand. This incentivizes cheap use of energy consumption. The main owner of the transmission project borne the project risk while the whole stakeholders borne the market risk.<sup>67</sup>
- 12) For one buyer and take or – pay model in renewable energy, the government must not allow the problem of technology obsolescence to be neglected as wind and power projects faces the problem of rapid change in technology which creates issues in financing new projects equipped with better technology. Moreover, it is important that PKR based returns on equity are provided to power projects in non – renewable energy instead of providing them in USD. The government must also add provisions in contract clauses that aim to provide ‘localization of maintenance services’ to reduce the impact on Current Account Balance. It is also crucial for investments in hydro – projects that issue of water mispricing is reduced as addition of these investment costs in power tariffs make the hydro – energy less competitive as the water storage capacity of these projects also benefits agriculture sector. There is also a need to provide clear regulatory environment in Pakistan for the net – metering which shall allow the surplus power to be included in the power feeders which will add to the

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<sup>65</sup> Ibid (n.43)

<sup>66</sup> Ibid (n.36)

<sup>67</sup> Pedro E Sanchez and Sameul Oguah, ‘Private Sector Participation in Transmission Systems: Making it Work’ (2015) World Bank Group Live Wire < [https://ppi.worldbank.org/content/dam/PPI/resources/ppi\\_publication/web\\_publication/100989-BRI-VC-PUBLIC-ADD-SERIES-Box393254B-Knowledge-Notes-LW52-OKR.pdf](https://ppi.worldbank.org/content/dam/PPI/resources/ppi_publication/web_publication/100989-BRI-VC-PUBLIC-ADD-SERIES-Box393254B-Knowledge-Notes-LW52-OKR.pdf) > accessed 17<sup>th</sup> July 2023

savings of the people investing in home renewable projects. Commercial lenders must also provide loans at a reduced interest rates for such projects.<sup>68</sup>

13) To develop investment in climate-resilient crop varieties, the Plant Breeders' Rights Act 2016 grants intellectual property protection to plant breeders who register specific seed varieties in the PBR Registry. Under this Act, breeders have exclusive rights to grow and sell their plant variety for a limited time, encouraging investment in the sector. The State Bank of Pakistan's (SBP) report 'Investigating Pakistan's Seed Industry Dynamics' noted that that without IPRs, there is no investment incentive for leading multinational companies (MNCs) like Monsanto and Syngenta from entering Pakistan. However, now private investment can be tapped in this area as 2016 Plant Breeders' Rights Act opened up areas for franchising opportunities for MNCs. For this purpose, the example of India is instructive as the country introduced 35 new seed varieties which include chickpea, soybean, rice, bio-fortified varieties of wheat, pearl millet, maize, and chickpea.<sup>69</sup>

14) Blended finance is important, but an enabling policy environment is important which is part of an integrated approach enabling private investment. For instance, technology should be present to improve data collection from the observations in climate changes to incentivize private investment in the country to provide technical assistance. This will also increase the availability of insurance products.<sup>70</sup>

15) The Pakistan Climate Change Act 2017 fails to empower provincial government in line with the spirit of the 18<sup>th</sup> Amendment which provides provincial autonomy in matters of climate change. It needs to empower local government, mayors, and District Commissioners rather than centralizing the funds. This will allow the input and effectiveness of the people intimate to the climate issues which are mostly, at the end of the day, very local in nature.<sup>71</sup>

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<sup>68</sup> Ibid (n.36)

<sup>69</sup> Rabel Akhund and Shazain Lasi, 'Chance at redemption: legal perspective on role of private investment in climate change mitigation' (*Business Recorder*, 12<sup>th</sup> April 2023) < <https://www.brecorder.com/news/40236543> > accessed 17<sup>th</sup> July 2023

<sup>70</sup> Ibid (n.26)

<sup>71</sup> Sarim Jamal, 'Examining the Pakistan Climate Change Impact 2017 in the Context of the Contemporary International Legal Regime' (2022) 5 LUMS Law Journal