

## **A BILLION TSUNAMI TREE PROJECT: EFFORTS TOWARDS ENVIRONMENTAL SUSTAINABILITY AND ECONOMIC GROWTH IN PAKISTAN**

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Pakistan is one of the richest countries in terms of natural resources; however, it has failed to manage those natural resources. As the world is striving to fulfill the Millennium Development Goals (MDGs) which includes bringing environmental sustainability, the question that arises here is where Pakistan stands among all the countries? Pakistan is included in the third world countries because of its economic situation. One of the major steps taken by the Pakistan government is to promote awareness in sustainability through projects like the Himalayan Jungle Project, the Palas Conservation and Development Project (PCDP), the Indus Dolphin Project (IDP) and the Marine Turtle Conservation Project. Secondly, a billion tsunami tree project in KPK: the country's largest ever tree planting campaign. The initiative aims to offset the country's shrinking forest cover while soaking up climate changing carbon dioxide from the atmosphere. At a cost of \$150 million, the project is underway in all 25 districts of the province under the Green Growth initiative, in which 1 billion saplings are being planted. "The Billion Tree Tsunami Project" is driven by current KPK Government's vision of Green Growth which ties in the needs for sustainable forestry development in Khyber Pakhtunkhwa generating Green jobs. Gender empowerment, preserving Pakistan's natural capital while also addressing the global issues of climate change. The Billion Tree Tsunami aims to increase Pakistan's forest area by 2 percent through the annual conversion of 30,000 hectares of land into forest. According to official numbers, 75 percent (or 750 million) trees have been planted or have been restored naturally with the help of the billion tree campaign. The campaign is said to achieve its target by the end of this year. There is need of billions of trees for the war against polluted air and to counter climate impacts. The project has been recognized by the Bonn Challenge, a global partnership that aims to restore 150 million hectares of the world's deforested and degraded lands by 2020 and was also recognized at the COP21 as one of the planet's leading forest restoration efforts. Such kind of programs are playing role in improving environment and creating jobs for local area people same time. This review paper aims to aware all stakeholders about basic concern of environment and sustainability. It's a way to enhance country's economy and also improve livelihoods of community. So, there is a need of conserving the environment and using the natural resources in a meaningful way. If we are using natural resources, then we should find an alternative in order to preserve the environment.

**Keywords:** Agri-tourism, sustainability, environment, economy, tsunami.

### **INTRODUCTION**

The greatest threat to our planet is the belief that someone else will save it." —Robert Swan

The history of the concept of sustainable development is closely linked to the changing perceptions of environmental concern, nature conservation and development during the last century. The flourishing of the sustainable development concept and its emergence as a new paradigm of development can be explained by the rise of international environmentalism and development studies in the mid-20th century (Elliott, 2008). Sustainable development is development that improves the living conditions in the present without compromising the resources of future

generations. Development is not sustainable when we spend or use all our resources. Now, leaving future generations with nothing. Such development is growing together, improving the thinking of others and respecting the environment. It has been significantly shaped by changing perceptions in development and environmental studies during the 20th century. There have been many changes in thinking in relation to the meaning, purpose and actual practice of development since the emergence of development studies in 1950s. During 1960s development prioritized economic growth and the use of modern scientific and technical knowledge to achieve progress in the developing world (Elliott, 2008). Sustainable development has been firmly introduced into the political arena of international thinking since the

interdependency of economic growth and environmental sustainability was recognized. The evolution of the concept and its emergence as a global challenge has been largely shaped by three mega-conferences. The United Nations Conference on the Human Environment in Stockholm in 1972. The United Nations Conference on Environment and Development in Rio de Janeiro in 1992 and The World Summit on Sustainable Development in Johannesburg in 2002. The documents produced by these conferences are all focused around a remarkably consistent core of mainstream ideas (Adams, 2009). There remain many definitions of sustainable development emerging from various disciplines with different assumptions about the relationship between society and nature, however, the definition provided by the Brundtland Report in 1987 is the most widely accepted and cited. The report produced by the WCED defined sustainable development “development that meets the needs of the present without compromising the ability of future generations to meet their own needs, time due to the evolution of environmental and development studies culminating in the widespread recognition of that economic and social development must be achieved in an environmentally-friendly manner (WCED 2007).

In September 2015, world leaders gathered in New York to agree on a new development plan or Agenda 2030 for Sustainable Development, incorporating the 17 Goals. The newly adopted SDGs reflected a coherent, holistic, comprehensive and balanced framework incorporating the three dimensions of sustainable development: social, economic and environmental with recognition of the direct linkages between human well-being, economic development and a healthy environment (ADB, 2015).

After recognizing the environmental factor in SDGs, different countries started different projects for the environmental stability. A project was started with different slogans: One Dollar = One Tree, Through the Canopy Project, Earth Day Network works on the ground with organizations worldwide that strengthen communities through tree planting. Using sapling and seed distribution, urban forestry, agroforestry and tree care training, we have empowered rural and urban people alike to conserve, repair, and restore tree cover to their lands. This project has led to millions of trees being planted on six different continents. Considering the United Nations estimates that for every dollar spent on reforestation, \$2.50 dollars is generated in local downstream income and benefits, that’s a huge impact. Since 2016, The Canopy Project has taken on even broader significance. Now, the important work of planting trees and improving lives around the world also supports Earth Day Network’s *Trees for the Earth* campaign. *Trees for the Earth* was the first of 5 new, ambitious, and goal-oriented campaigns to be launched in the run up to Earth Day’s 50th anniversary in 2020. It’s goal: to plant 7.8 billion trees worldwide by 2020—one for every person projected to be on earth. Working with donors and

partners, we’ve already planted or received commitments to plant over a billion and a half trees in support of this campaign. However, we still have billions to go, meeting this challenge won’t be easy. That’s why we need your help. Contribute now and empower us to make a difference on your behalf (UNDP, 2017).

While when some body takes a look over here in Asia, Pakistan is one of the richest countries in terms of natural resources; however, it has failed to manage those natural resources. As the world is striving to fulfill the Millennium Development Goals (MDGs) which includes bringing environmental sustainability, the question that arises here is where Pakistan stands among all the countries? Pakistan is included in the third world countries because of its economic situation (GOP, 2005). Here is such a need of sustainable development in context of environmental factor. Green growth in the context of Pakistan means efficient, appropriate and affordable use of our natural resources and reduces the vulnerabilities of climate change [Khan (2002); UNEP, ESCAP, ADB (2010). Pakistan is one of the most resilient nation in the world and living in a red zone area and a dire need of inculcating the green economy concept into the policies (IUCN, 2011; Planning Commission of Pakistan, 2012).

The country's hills were once home to endless stretches of pine and fir trees but these days Pakistan's forest cover is somewhere below 3 percent. In the United States, that number is roughly 31 percent, in India 24 percent and in Japan its 63% of the total land. In an ambitious plan to counter this deforestation, which ecologists say is a major cause of deadly landslides, the government of a province along Pakistan's restive border with Afghanistan says it is a quarter of the way to a goal announced last year: planting 1 billion saplings. This initiative of Green Growth, launched and currently underway, in Khyber Pakhtunkhwa (KP) has been a step in that direction. The most obvious litmus test for any such initiative, however, lies in translating it into projects on the ground and allocating them a share out of the budgetary pie. This important step was diligently followed last year and culminated in a stream of projects one of which is the Billion Tree Tsunami. After going through a detailed consultation and development process, this flagship project is now clearly defining new frontiers for growth and protection of KP’s forests. These forests can truly be termed the lungs of Pakistan — as they constitute 40 percent of the country’s forest cover. Overall, Pakistan’s forest cover is a paltry four percent of land area which is one of the lowest in the world and much lower than the average of 35 per cent present in environmentally healthier countries. In addition, even this meagre forest cover is under threat with one of the highest deforestation rates in the world. These trends are not only shockingly unacceptable but are now a direct threat to the country’s sustainable future. Owing mainly to its geography and topography, Pakistan is now considered one of the most vulnerable countries to climate change

impacts. The melting glaciers in the north, erratic monsoon patterns and repeated devastating floods in the past few years have been a stark reminder of the devastation and infrastructure loss this vulnerability can cause. The ever-thinning forest reserve not only multiplies the loss due to climate change but also weakens one of the most effective tools that Pakistan has for not only sequestering carbon but also building local resilience to the impacts of climate change. Currently, timber mafias," as well as Afghan refugees and local themselves, have chopped down immense swaths of forest (Khan and Malik, 2011). The change in forest area in comparison with the other countries is given in Fig. 1.

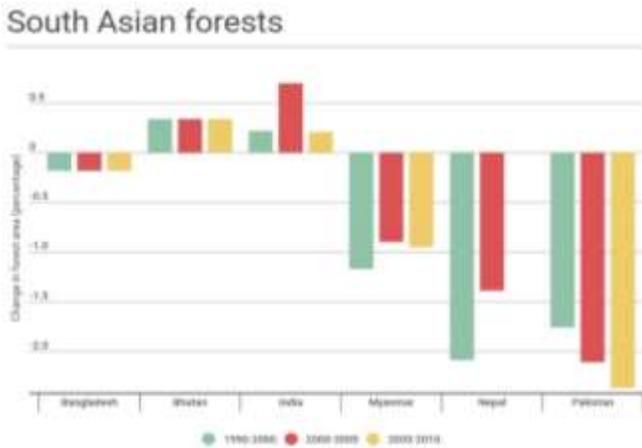


Figure 1: Change in forest area of different countries

Masses in Khyber Pakhtunkhwa don't have electricity, or don't get it regularly and use wood fires for lighting, cooking and warmth. The so-called mafia refers to those who cut trees without a permit and allegations that politicians engage in that business are common in Pakistan. Locals have complained to Pakistani media that the whole program puts them at an economic disadvantage. The region is one of Pakistan's poorest and many rely on what's left of the forest for income. If they couldn't cut the trees for wood, some said, then new trees should produce fruit which could be sold to buy wood (KPK, 2016).

The Forest Department is utilizing local people's land and have to fulfill their demand giving some space to eucalyptus because of its speedy financial benefits. The project will have very far-reaching good impact in fight against environmental degradation and for having a climate resilient future. After extensive monitoring of BTTAP, based on random checking of plantation sites, the WWF team found that the survival rate of plants is very appreciative, he added (WWF, 2016).

The project has also won international recognition as has been accepted for BONN Challenge and declared as one of the six forest leaders in the world during COP 21 conference in Paris (France). The project has been designed with various innovative features which are breaking new ground in KP and

aim to ensure the long-term sustainability of this drive. Under this project, small-scale 'eco-preneurs' are being created in the province by privatizing various facets of forest growth and protection. In this regard, firstly an innovative program for establishing 'youth nurseries' has been initiated. The government is encouraging local villagers to set up small nurseries (20,000-25,000 plants) which will have secure buy-back agreements with the Forest Department generating an income of between Rs12,000 to Rs18,000 per month for the local youth thus providing green jobs with dignity for the youth of KP. This program is already underway and is backed by a detailed village level GIS mapping and monitoring done for the whole province (see Fig. 2 and 3).



Figure 2: GIS mapping



Figure 3: GIS monitoring and Google Forest.

Secondly, the project innovatively focuses on outsourcing new forest growth to the private sector — in addition to

creating more eco-preneurs, this will also ensure survival of planted forests through performancebased payments spread over a threeyear period as the saplings turn into trees. Thirdly, for forest protection, the local communities being traditional custodians have been extended responsibility for ‘forest closure’ to ensure protection and enrichment of the forests. Under a partnership agreement with the government, they will be allowed to train and hire local ‘Forest Nigahbans’ (Forest Guards). This initiative will be financed by the government and provide more jobs for the youth and ensure responsible protection of forests. The government is also in the process of establishing rules for REDD+ (Reducing Emissions from Deforestation and Forest Degradation-plus) to capitalize on latent carbon benefits and transfer these benefits to the communities. In addition, a complete ban on cutting and felling of trees in the reserved forests of KP and ensuring complete transparency through independent third-party monitoring utilizing tools such as GIS monitoring and Google Forest Watch are other features of the program. All these steps have been complemented with a crackdown against the powerful timber mafia, which has brutally shaved off more than Rs100 billion worth of natural forests in the past 10 years (as indicated through Fig. 4).



Figure 4: Natural forests in the past 10 years.



Figure 5: Monitoring procedures

The KP government has publicly vowed to curb their activities, cut off their sources in the government, raise and

strictly enforce penalties, enhance satellite real time monitoring and have a zero-tolerance policy towards their nefarious activities and reclaim nature from these mafias. The Billion Tree Tsunami is a unique project extending a win-win opportunity for KP, Pakistan and the world. For KP, it is enhancing forest cover while generating green jobs for the youth. The monitoring procedures are visible in Fig. 5.

## MATERIALS AND METHODS

As it was a case study of specific province of Pakistan, so we mostly selected the targeted areas of KPK. Areas for data collection was selected purposively that were Malakand, Hazara region and Sawat. Primary data collected from the people that were available at the spot on different Nurseries. While Secondary data collected from different reports, government organizations and departments related to sustainable development and all other related to environmental matters related to this project. Quantitative questions were used for the economical aspect of primary data while qualitative data techniques were used to get real view and picture of this environmental sustainability factor (SDPI, 2011). The survival rate of plants in block plantation is evident through Fig. 6.

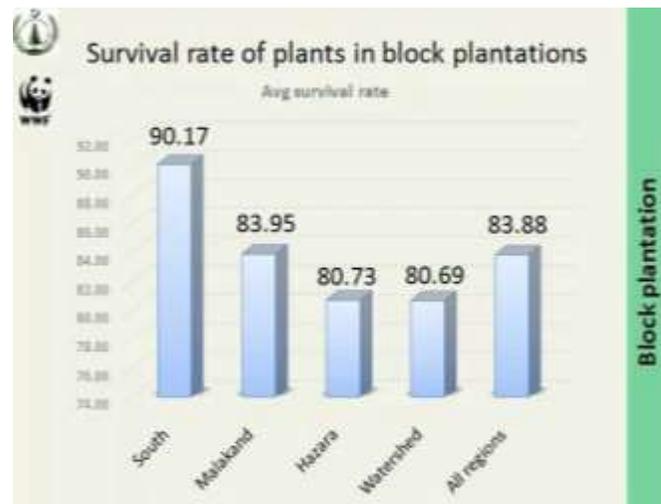


Figure 6: Survival rate of plants in block plantations

## RESULTS

The Billion Tree Tsunami is a unique project extending a win-win opportunity for KP, Pakistan and the world. For KP, it is enhancing forest cover while generating green jobs for the youth.

For Pakistan, this project will enhance water availability, reduce soil erosion and increase resilience against climate induced floods. For the world, this project will sequester carbon and contribute towards global climate mitigation. Overall, the Green Growth Initiative of KP, embodied by

projects such as the Billion Tree Tsunami, aims to create a paradigm shift in KP's growth trajectory — leading to prosperity, poverty reduction and a better quality of life for the people while fulfilling the imperatives for a cleaner environment.

For the first time in the history of Pakistan, the forest area in KP is targeted for a major enhancement from 20 per cent to 22 per cent by 2018, which would entail bringing new area under forests as well as protecting and enriching the existing area. Thus, under the project, at least 30,000 hectares of additional forests will be planted through a massive afforestation drive. In addition, through enrichment measures, the tree cover in existing forests would be targeted for increase from 20 per cent to 30 per cent by 2018. This would entail protection and gap plantations in, at least, 27,000 hectares each year. The above ambitious targets would be achieved through the massive four-year Billion Tree Tsunami project, which is now underway.

### **RECOMMENDATIONS**

- All other provincial level governments should start such projects in their districts specially in Balochistan and Sindh.
- Government should create such eco-friendly jobs for sustainable development.
- Government should provide enough funding at research institute for the sustainable environment related projects.
- Seminars should be held for the sustainable development to aware the population.

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