Bringing Back the Forest: Reforestation Provides Climate Mitigation Opportunities for Mining Regions of the World¹

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Abstract: Sequestration of carbon by forests has been identified as a tangible method for limiting the rise of CO₂ in the atmosphere and mitigating climate change. The Intergovernmental Panel on Climate Change (ICPP) recently reported that an increase of 1 billion hectares of forest on Earth could limit global warming to 1.5°C by 2050. Where these 1 billion hectares, or approximately 1 trillion trees, will go is a tricky question. With concern about global food shortages and increased wildfires in a changing climate, forest establishment on productive agricultural lands and areas near urban centers would be discouraged. However, disturbed lands that were previously forested and marginal agricultural lands would be suitable if soils can facilitate forest growth. Since 1977, over 1.7 million acres of Appalachian forest have been destroyed by surface mining, producing significant economic, environmental, and ecological challenges. Successfully reestablishing the hardwood forest ecosystem that once dominated these areas will provide a renewable, sustainable multi-use resource that will create economic opportunities while enhancing the local and global environment. Green Forests Work (GFW) was created to restore forests on these mine impacted landscapes. Since 2009, over 300 tree planting projects/events have been held in Appalachia. Those events involved over 21,000 volunteers and resulted in the planting of nearly 4 million trees on lands impacted by the legacy of coal mining. Following GFWs approach, similar reforestation projects have been initiated on mined lands in Australia and interest is growing in other countries. Successful rehabilitation and revegetation of mine-impacted land is vital for the current and future prosperity of mining regions across the globe. A commitment to improving conditions on reclaimed mined land for the future seems like a worthwhile investment. By improving our ability to rehabilitate mined land we create new opportunities for lands that are often considered marginal, and we stand a chance of contributing significantly to the development of a sustainable future.

Additional Key Words: native plants, legacy lands, carbon sequestration, jobs.

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