

Addressing Climate Change Through Environmental Restoration

Geo Teva Environmental Consultants

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The ultimate renewable energy is human ingenuity.
– Irina Bokova, UNESCO Director-General

The newest report by the International Panel of Climate Change (IPCC) reports unequivocally that the climate is changing due to the anthropogenic emissions of greenhouse gases (GHG). These changes are occurring more quickly than originally anticipated, and the rate of change is increasing. If drastic reductions to global GHG emissions are not immediately made, our world will continue to experience more extreme weather events. Some regions will become drastically hotter and drier while others will become inundated with water until unlivable. Only with immediate changes to energy production and pollution regimes can we minimize climate changes to a moderate level (see Figure 1 for possible future outcomes based on action taken to reduce GHG emissions today).

At Geo Teva, we recognize the need to act to slow Climate Change (CC) and to create a more resilient world that can withstand the inevitable changes to come. We believe each individual, business, government, and organization should address CC according to their own strengths. Ours lie in Environmental Preservation and Restoration.

In Israel, the climate is predicted to become hotter and drier. Maintaining a healthy ecosystem directly contributes to a more resilient and abundant future. In our two decades of consulting, we have planned a wide variety of projects which maintain and improve the

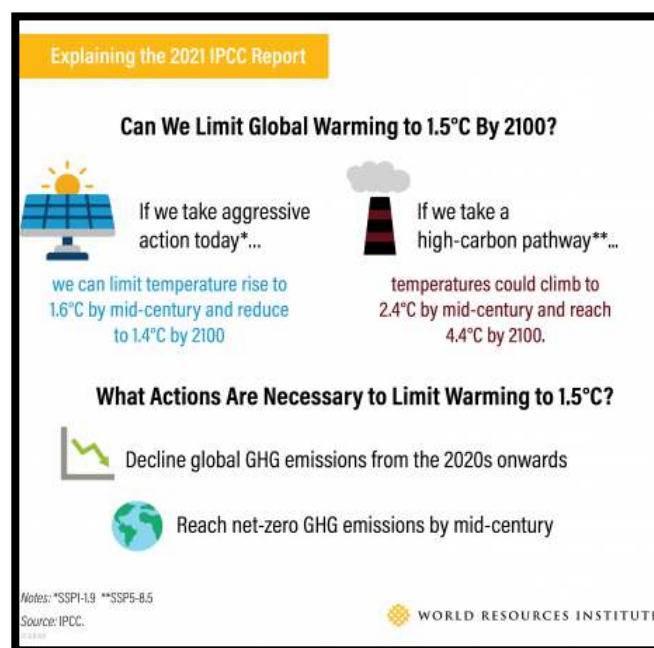


Figure 1: The different futures possible based on how we address GHG emissions today. By the World Resources Institute, based on the August 2021 IPCC report.

natural environment (examples on pg. 2), yet while ecological preservation is crucial to building resilience, we see the need to expand our framework to manage carbon emissions.

Israel is one of many countries that is now in the process of passing a “Climate Law” to limit emissions, produce energy cleanly, and to ensure that future development occurs in the most responsible and beneficial way possible. We, at Geo Teva, are building a framework to help Israeli industries minimize their Carbon Footprint by minimizing and sequestering their emissions in the

most economic and ecological way possible. Our carbon management framework includes strategies customized to each project, including:

- Unique applications of Green Building techniques focusing on low-carbon materials,
- Calculations for trees required to offset carbon emissions, according to bioregion
- Mixed-land use for maximized potential, e.g. agrivoltaics for food and energy production
- Waste management which minimizes methane emissions
- Creating partnerships between the industry and entrepreneurs to simultaneously fund development and mitigate emissions.
- Sustainability analysis and report for individual projects to help managers identify opportunities to make greater positive impacts, based on the GRI ESG reporting framework.
- Guidance on other carbon sequestration strategies and offsets for large emitters.

As our country continues to develop new resources to become energy independent, minimizing the impact of that production is just as crucial to slow climate change and create a resilient future. Sustainability requires partnerships and collaboration, and we are always ready to make new friends in the industry. We welcome contact from other organizations who wish to work together or share effective strategies for preserving the environment and building a more resilient, sustainable future, together.

We support the UN' s Sustainable Development Goals. Our work directly contributes to the following goals:

Some of our successful Protection, Restoration, and Research projects include:

- The preservation of ecological corridors along various PV solar farms, including in Timnah and Shapir.
- Creating a geomorphologically-based framework to the restoration of natural gas pipelines and its implementation for the successful rejuvenation of the natural environment to its original in various ecosystems throughout Israel. Some of these projects include: Dor Hagit, the Jerusalem Pipeline, the Judean Desert Pipeline, and more.
- Creating a methodology for roadside soil erosion prevention which is now in use along Road 6 and throughout the country.
- Performing research studies which demonstrate the effectiveness of mixed-land-uses for renewable energy production and agricultural development. One of these studies includes the first Agri-PV facility in Israel established in Mashabei Sadeh which observed a significant increase in electricity output due to the vegetative ground cover. In another study, we observed the hydrometric flow of runoff water from a PV system to better understand waterflows during extreme weather events.
- Analysis of wind turbine potential and minimization of impacts to local and migrating bird and bat populations.

