

Our biodiversity principles:

1. Protect, promote, and defend the natural environments within Permian Global project sites.
2. Protect and conserve the naturally occurring plant and animal species at all Permian Global project sites.
3. Describe and document the species, habitats, and ecosystem dynamics at each Permian site to guide conservation efforts and inform adaptive management.
4. Evaluate the status of all locally, nationally and internationally listed species of concern and work to improve their status.
5. Prevent the introduction and naturalization of exotic and invasive species and where feasible prevent their further expansion.
6. Work to restore native habitats and ecosystems where degradation has occurred unless Permian and its partners agree that an alternative use of the area enhances the overall success of the project.
7. Work within the cultural traditions and in cooperation with indigenous peoples and neighboring communities to protect local biodiversity, encourage the observance of local laws against poaching and illegal fishing and eliminate habitat destroying activities, such as logging and mining.
8. Incorporate local knowledge and engage and empower local and indigenous communities as key partners in biodiversity conservation.
9. Contribute to furthering scientific knowledge through in-house research and publication, as well as being open to and encouraging collaboration with in-country and foreign scientists from non-government and academic institutions.

## Notes regarding the above:

### **1. Protect and Promote:**

Permian Global projects must be designed in a way that ensures that the natural environments under our care are in a continual process of becoming ecologically healthier, more diverse, and more able to sequester carbon. This includes identifying and mitigating threats to the landscape and implementing measures that protect and enhance the environment. At its most basic, Permian's aim is to ensure that the species, ecological processes and ecosystems at Permian project sites are demonstrably richer and more robust at the end of the project lease than at the start. Once a baseline is established we must develop methods of measurement to evaluate what changes have occurred.

### **2. Species Health and Diversity:**

Permian Global's interest in species diversity is motivated by curiosity, wonder and a profound sense of ethical responsibility to the natural world, whilst its approach is informed by scientific expertise, continual research and pragmatic systems-thinking. Our goal is to apply the latest knowledge and best practice to enable all naturally occurring species that depend on the landscapes we work in to thrive. This includes attention to individual species as well as attention to protecting the most diverse habitats. We recognize that more mature biodiverse forests can capture and store more carbon dioxide to meet our primary goal of carbon sequestration and thus provide the funds for biodiversity protection and restoration.

### **3. Describe and Document:**

Permian projects encompass tens of thousands of species, dozens of habitats and multiple ecosystems. We must use the tools, finances, and expertise available to us to ensure the greatest level of impact is achieved within what is possible. We aim to describe and document a significant portion of the most abundant species in numbers or biomass while concurrently developing a data base for rare, threatened and endangered species. Our goal is to describe the dominant and biodiverse habitats, and as well as develop habitat and ecosystem maps for each of our sites. Accomplishing this will be an on-going and long-term effort by our technical staff with as much outside help as we can effectively manage.

### **4. Evaluate Listed Status:**

Identifying listed status species can largely be accomplished for listed vertebrates, trees, butterflies, orchids, and other well-known groups. Many lesser-known taxa of fungi,

other plants and invertebrates may take years to complete. The rare, threatened and endangered (RTE) species lists are available but are always behind the rates of exploitation and loss. We need to be proactive and become one of the companies that is adding to the global knowledge of biodiversity.

#### **5. Preventing Invasive Species:**

Degraded or lost forest lands are often sites where invasive species can get a foothold. In many countries invasive species, such as African Grass, are introduced as part of land restoration, as forage for cattle or as rapid soil stabilizers on sloping land. This may have happened inside the boundaries of our project sites but is more likely on its fringes in public or privately owned land. Invasives are a significant problem in aquatic situations where exotic fish are introduced as a potential food source. This usually ends in disaster for endemic or local species. Often such introductions happen with the support of local or international agricultural interests and government fisheries departments. Permian actively opposes such introductions and will work to prevent them.

#### **6. Restore Native Habitats:**

Permian's general policy is that forest restoration should be accomplished through natural restoration by the surviving seed bank within degraded or deforested lands or by seeding from boundary areas by wind or animal dispersal. Natural selection provides a far more diverse and properly distributed plant base. Restoration through plantings from nurseries is expensive and cannot usually be done on large areas that have been converted to pasture or recently burned. However, small areas can benefit from human intervention and restoration, particularly within wildlife corridors. In some cases, small areas of degraded or destroyed land, can be better used to promote overall project success by conversion to native species, which provide food, jobs and livelihoods for indigenous peoples or community partners.

#### **7. Work within Traditions and Engage:**

Permian Global is in a good position to be recognized as a public advocate for the protection of rare, threatened and endangered (RTE) species. This cannot be done without the enthusiastic support and involvement of indigenous people within the properties or neighbors on its boundaries. Traditional cultural uses of RTE species from our properties, such as bird feathers for decoration can be addressed directly through our agreements and mutual understandings with our partners. In any event we recognize local, national and provincial laws. For non-RTE species we know that education and encouragement are our best tools for long term biodiversity

conservation. Permian, fundamentally believes in the integrity of natural ecosystems preventing species extinctions or further endangerment.

#### **8. Incorporate Local Knowledge:**

Indigenous peoples usually know more about their forest areas than anyone else. They know what species are used for medicines, for food by hunting or gathering, for building materials and where to find them. They have information on species numbers and ecology. Fully engaging them in biodiversity activities from the beginning helps the effort's success. Experience has shown that engaging adults in biodiversity work and educating children through school programs about the importance of forests and wildlife makes them allies and the best advocates for conservation. The wildlife trade is one of the most lucrative and crime ridden around the world. Many of the species appearing in the appendices of international treaties are there because of rapid, uncontrolled trade and smuggling which is still going on throughout the world in spite of attempts to constrain it. Recently giraffes have been subject to enormous poaching pressure for a newly developed demand for giraffe bones and skins. The trade moves very fast and can change species rapidly. A decade ago, pangolins were just entering wildlife trade and now more than half the species on earth are endangered. We must guard Permian sites against such commercial activities, as well as through unsustainable local use if it is occurring on project sites. Illegal fishing activities are one of the most difficult to deal with since most of the catch is used for local human consumption. All such activities, including poaching, illegal logging or other such activities need to be fully documented before they can be responsibly addressed and resolved.

#### **9. Encourage Outside Scientists:**

Domestic and foreign scientists can be a great benefit in accelerating our knowledge of taxa which are difficult to identify and need years of training or experience. Outsiders may also be able to bring in graduate students or knowledgeable volunteers, who could help in the significant labor required for measuring and censusing specific groups of plants and animals. Domestic and foreign researchers and collaborators, however, require Permian staff time and funds for management. Outsiders are most helpful when augmenting something that we already are doing or want to do if we had more help. They also raise the question of who controls the information that is developed. Permian should have a written agreement on how information developed for publication, raw data, photographs and scientific specimens are to be distributed and shared. Most tropical governments have policies regarding scientific collaboration, so any partnerships for research must be approved and have relevant permits. Partnerships with academic institutions from foreign countries will normally be required to work with a local university or institution. Permian should encourage

this practice where possible. Auditors, investors, as well as the public often give a high mark for cooperative ventures, particularly if we make the results and new knowledge widely available.