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Understanding the Links in the Green Supply Chain[®]

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INTRODUCTION

Good morning ladies and gentlemen. It's great to be among green-fingered people. My background: National Diplomain Horticulture, Bachelors of Technology in Environmental Management, owned a landscaping business for several years, before continuing my studies and completing a Masters of Science (MSc) in Conservation Ecology. I now focus my energy on addressing environmental issues (more specifically climate change-related) within the land-use-based sector.

What I'm offering you today is a holistic view of risks and opportunities (in relation to climate change) as I see it for this industry (a broad level approach), what they mean for your business, and how you can start addressing them.

First and foremost, effective collaboration and linking together — both within industries/sectors and with government — is the only way to tackle the challenges of changing climate both in terms of effectiveness of the action, as well as financial feasibility of technological and process changes.

WHAT IS CLIMATE CHANGE?

In essence it's all about greenhouse gases (GHG). In natural quantities these GHG are vital in forming a thin layer around the earth that regulate earth's temperature, thereby allowing life on earth to exist.

However, in recent history (post-industrial revolution) unnatural or human-induced increases in these GHG are causing an excessive build up of these GHG in the atmosphere. This changes the natural systems — to tipping point — which is where we are now. The bottom line is, we caused this mess and we need to act now to prevent it from worsening.

DIFFERENT GREENHOUSE GASES

Carbon dioxide (CO₂) — the most abundant GHG in atmosphere — is the unit of measure that all other GHG are valued against. For example, methane is 21 times stronger (in terms of global warming potential or GWP) than CO₂ and therefore 1 unit of methane equals 21 units of carbon dioxide equivalent (CO₂e). Similarly (and important for this industry) nitrous oxide (N₂O), which is released when nitrogen-based fertilizers break down and combine with oxygen to release nitrous oxide, is 298 times stronger than CO₂, therefore 1 unit of N₂O equals 298 units of CO₂e.

Some of the most predominant impacts of the increase in GHG on global scale are increase in temperatures, decrease in water availability, and increase in season variability.

For example, if a line is drawn down South Africa, the east is expected to get wetter and cooler, while the west drier and hotter. What is important to note is that not all the impacts of climate change are bad. Some agricultural crops for example, may increase in yield due to more productive growing conditions. However the biggest problem is change in seasonal patterns (e.g., chill units, rainfall patterns), and understanding how to work with the new climate.