



**Ron Dodson** and **Bill Love** are the founders of Love & Dodson, LLC a firm that specializes in sustainable planning, design, construction and management of golf courses, recreational facilities and sanctuaries. [www.loveanddodson.com](http://www.loveanddodson.com)

## BECOME CONSERVATION MANAGERS

The Millennium Ecosystem Assessment (MA) was carried out between 2001 and 2005 to assess the consequences of ecosystem change and to analyze ways to enhance the conservation and sustainable use of ecosystems and their contributions to our wellbeing. The MA responded to information requests received through the Convention on Biological Diversity and other international conventions and is designed to meet the needs of other stakeholders, including business, civil society, and indigenous peoples. It has been nearly 8 years since the MA was produced and distributed. The key findings still hold true, only the status of biological diversity is worse than it was a decade ago. While working on individual sites – such as a golf course – might be a fine idea, this site-by-site approach is not getting the job done. We must link individual landscapes and work from a regional perspective. Here is a summary of the MA 2005 findings.

**1** Biodiversity benefits people through more than just its contribution to material welfare and livelihoods. Biodiversity contributes to security, resiliency, social relations, health, and freedom of choices.

**2** Biodiversity changes due to human activities were more rapid in the past 50 years than at any time in human history, and the drivers of change that cause biodiversity loss and lead to changes in ecosystem services are either steady, show no evidence of declining over time, or are increasing in intensity. Under the four plausible future scenarios developed by the MA, these rates of change in biodiversity are projected to continue, or to accelerate.

**3** Many people have benefited over the last century from the conversion of natural ecosystems to human-dominated ecosystems and from the exploitation of biodiversity. At the same time, these gains have been achieved at growing costs in the form of losses in biodiversity, degradation of many ecosystem services, and the exacerbation of poverty for other groups of people.

**4** The most important direct drivers of biodiversity loss and ecosystem service changes are habitat change,

climate change, invasive species, over exploitation, and pollution.

**5** Improved valuation techniques and information on ecosystem services demonstrate that although many individuals benefit from biodiversity loss and ecosystem change, the costs borne by society of such changes are often higher. Even in instances where benefit and cost knowledge is incomplete, the precautionary approach may be warranted when the costs associated with ecosystem changes may be high or the changes irreversible.

**6** To achieve greater biodiversity conservation to improve human well-being and reduce poverty, it will be necessary to strengthen response options that are designed with the conservation and sustainable use of biodiversity and ecosystem services as the primary goal. These responses will not be sufficient, however, unless the indirect and direct drivers of change are addressed and the enabling conditions for implementation of the full suite of responses are established.

**7** Trade-offs between achieving the 2015 targets of the Millennium Development Goals and the 2010 target of reducing biodiversity loss are likely, although there are many potential synergies between the various

internationally agreed targets relating to biodiversity, environmental sustainability, and development. Coordinated implementation of these goals would allow the consideration of trade-offs and synergies.

**8** An unprecedented effort would be needed to achieve by 2010 a reduction in the rate of biodiversity loss at all levels. (*This goal was not met.*)

**9** Short-term goals and targets are not sufficient for the conservation and sustainable use of biodiversity and ecosystems. Given the characteristic response times for political, socioeconomic and ecological systems, longer-term goals and targets are needed to guide policy and actions.

**10** Improved capability to predict the consequences of changes in drivers for biodiversity, ecosystem functioning, and ecosystem services, together with improved measures of biodiversity, would aid decision-making at all levels.

**11** Science can ensure that decisions are made with the best available information, but ultimately the future of biodiversity will be determined by society.

So, what does this mean for superintendents? It means we need to walk the walk of conservation management for the good of the individual courses we are responsible for, and we must see beyond our individual borders and encourage golf outsiders to follow our lead. We must think about watersheds and all the various land uses within that region and make connections with the people, companies and municipalities who manage them.

This will be great for the game of golf, but critical to the future of our environment. **GCI**