



# Conservation Governance Lab

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## Research note: Top Ten “Need to Know” Digital Games for Nature

By Lucy Erickson. December 2011

*The popularity of on-line computer games and mobile phone applications suggests that conservation organizations might be able to tap into this new frontier for communication, outreach and fundraising. But what type of game might work for your organization? Read on for examples ranging from hard-core strategy games to subtle artistic virtual worlds and devise your strategy.*

*My choices are based on a comprehensive review of the academic literature around computer games and ‘gamification’; a review of existing environmental games; and a series of in-depth interviews with key individuals in the field. This research is currently being worked up into a series of academic articles discussing the potential to mobilise the time, effort and perseverance devoted by users to computer games to stimulate positive environmental action.*

### Social Media

**Tweet & Grow:** *“Easy to learn but difficult to master, Tweet & Grow invites you to nurture some amazing plants featured at Kew Gardens this summer. Success equals fantastic prizes which you can redeem when you visit Kew.”*

**Organization:** Kew Royal Botanical Gardens

**Focus:** Botany

**Genre:** Social Media Game (Twitter)

**Special Feature:** Tweet & Grow encourages players to follow Kew on Twitter as well as tweet about their game experience in order to get hints and tips. This is a creative strategy for increasing Kew’s Twitter following, and for advertising their game. Tweet & Grow also encourages players to visit and explore the gardens, which represents a way of modifying real-world behaviour through a game.

**My Conservation Park:** *“Protect your endangered animal hero from environmental and human threats. When you enrich your park with goods from the in-game store, 15% of the revenue will be donated to our nonprofit partners.”*

**Organization:** Games for Good, in partnership with conservation NGOs including Sea Shepherd, Dian Fossey Gorilla Fund, Orangutan Outreach, WildAid & United Conservationists.

**Focus:** Protected Areas



**Genre:** Social Media Game (Facebook)

**Special Feature:** Most conservation organizations are working on a limited budget and lack the funding and expertise to develop their own games. The conservation parks from Good World Games (for-profit professional game developers) are created based on scientific input from conservationists, but created and maintained by a company motivated by the belief that games can contribute to a better world. Furthermore, 80 million people play FarmVille on Facebook and the virtual goods market is £1.6 billion in the U.K. – meaning this type of game is potentially a great fundraising tool.

**Ecotopia:** *“Ecotopia, a free-to-play Facebook game with a social conscience, advances the popular city-building game model as it aims to wrap fun and compelling gameplay with philanthropy and real-world involvement via the world’s largest social networking site.”*

**Organization:** Conservation International

**Focus:** Sustainable Cities

**Genre:** Social Media Game (Facebook)

**Special Feature:** In summer 2011 Ecotopia challenged its players to buy 25,000 virtual trees to populate their cities. In return, Talkie (the game developers) planted 25,000 real trees in Brazil. This shows that people are willing to contribute to real world efforts through games. However, despite massive media hype early on, Ecotopia has very few players compared to other Facebook games. Sometimes earnest messaging can get in the way of good gameplay, and finding the right balance is very challenging.

## Citizen Science

**Old Weather:** *“Help scientists recover worldwide weather observations made by Royal Navy ships around the time of World War I. These transcriptions will contribute to climate model projections and improve a database of weather extremes.”*

**Organization:** National Maritime Museum

**Focus:** Climate Change

**Genre:** Citizen Science Project

**Special Feature:** Citizen science projects are not only helping to get huge amounts of data analysed and making a tangible contribution to research, they are also encouraging the democratization of the scientific process by allowing participants to generate their own research questions within forums. [More information](#).

## Strategy

**Fate of the World:** *“Fate of the World is a PC strategy game that simulates the real social and environmental impact of global climate change over the next 200 years. The science, the politics, the destruction — it’s all real, and it’s scary.”*

**Organization:** Red Redemption & Dr Myles Allen, The University of Oxford

**Focus:** Climate Change

**Genre:** Strategy Computer Game

**Special Feature:** Fate of the World is sold on the popular online game platform Steam, where it is marketed as a hard-core strategy game with no special reference to its educational content. Learning about climate change is an incidental as opposed to an interruption to gameplay, meaning this game is much more likely to succeed in a mainstream market and reach a new audience for conservation. Players then have the chance to discuss solutions to the very real-world problems of climate change in the game forum.

**SimSafari:** *“A construction and management simulation games set in Africa. It was created by Maxis, partly as an educational tool for children to learn about environmental balance.”*

**Organization:** Maxis

**Focus:** Environmental Balance

**Genre:** Strategy Computer Game

**Special Feature:** SimSafari is a spin-off of a very popular game, SimCity, that won Best Entertainment Game, Best Education Game and Best Simulation Game in 1989 and has sold the most units of any PC game. Adding a conservation message to a pre-existing model already proven to be successful reduces the risks involved with building a game from scratch, and ensures that the message will be heard by a large audience.

## Digital updates of ‘traditional’ games

**Top Trumps Sharks Online:** *“Top Trumps is fondly remembered from its original heyday in the playgrounds of the 1970s and 1980s. The online game is not only loved by nostalgic mums and dads but also kids of all ages as their favourite subjects are brought to life!”*

**Organization:** Winning Moves

**Focus:** Charismatic Species

**Genre:** Online Card Game

**Special Feature:** Top Trumps is a well-loved children’s card game and the online version is also very popular. With packs including ‘endangered species,’ ‘sharks’ and ‘sea life in danger,’ this

simple game is able to subtly impart learning and awareness to players as they battle their decks and memorize stats. A simple tested and true game concept is also less risky and costly for small organizations who want to test a new form of outreach.

## Interactive Online World

**The Blu:** *“The Blu is a beautiful interactive online world where every marine species and habitat is a unique work of art created by digital artists and developers around the world.”*

**Organization:** Wemo Media & “Makers” (volunteer digital artists and developers)

**Focus:** Marine Conservation

**Genre:** Interactive Online World

**Special Feature:** The Blu is an amazing, relaxing and beautiful world to explore. This type of game can raise awareness and appreciate for the natural world by introducing it to people in an accessible way. Each item within the digital ocean is also available for purchase, with a part of the proceeds going towards ocean conservation. Finally, The Blu represents another innovative field in science communication: linking with artists and the fine arts to encourage creative new ways of thinking about the natural world.

## Mobile Phone Apps

**Angry Birds:** *“Use the unique destructive powers of the Angry Birds to lay waste to the pigs’ fortified castles. Angry Birds features hours of gameplay, challenging physics-based castle demolition, and lots of replay value.”*

**Organization:** Revo

**Focus:** Extinction Risk – In partnership with BirdLife International

**Genre:** Mobile Phone App

**Special Feature:** With over 500 million combined downloads, Angry Birds and its expansion games are incredibly popular. Although Apple doesn’t allow “donation” buttons on its apps, Angry Birds is committed to providing BirdLife International with support in the form of awareness raising and access to their vast audience. Tapping into a pre-existing phenomenon like Angry Birds is a low-risk and possibly very effective outreach strategy.

**ARKIVE – Survival:** *“Race against the clock in a battle for Survival! Tap, drag, scroll, swipe and pinch your way through a series of wild mini-games to earn the title of Top Survivor.”*

**Organization:** Wildscreen

**Focus:** Endangered Species

**Genre:** Mobile Phone App

**Special Feature:** Designing a mobile phone app based explicitly on a conservation message allows a more direct form of education and outreach. This type of messaging can sometimes feel forced or boring, but this game's emphasis on fun mini-games has the potential to reach a mainstream audience. Released at the end of October, 2011 it has so far received very positive reviews for its entertaining gameplay and amazing images. If uptake of this game continues, it could be a good model for future mobile app outreach attempts.