

# Arctic Saga: A Game of Negotiation and Environmental Conscientiousness

Christian de Luna, Christopher Vicari, Thomas Toynton, Joey Lee  
Teachers College, Columbia University

## Introduction

*Arctic Saga* is derived from a classroom exercise developed by Teachers College, Columbia University titled Arctic SMARTIC (Strategic Management of Resources in Terms of Crisis). As its title suggests, SMARTIC was designed as an informative experience for students interested in learning about the current Arctic environmental and economic climate. The purpose behind the creation of *Arctic Saga* was to design a self-facilitated version of the classroom exercise that conveyed the central tenets of the SMARTIC classroom exercise that could be distributed and played at a number of venues including cruise ships, museums, and middle-school classrooms.

At Teachers College, Columbia University, a team of game designers created *Arctic Saga*, an educational board game designed to simulate marine spatial planning, a conflict resolution technique used to mediate stakeholder spatial interests in disputed geographical areas. In the game, players negotiate stakeholder economic interests while working together to maintain the Arctic environment.

Takeaways from gameplay will certainly be influenced by these differing environments and we plan to observe these differences in gains during the upcoming year. Ultimately, we hope that players will learn about the Arctic region, negotiation, environmental welfare, systems-thinking, and connectivity.

## ARCTIC SAGA

- Marine spatial planning game to manage competing Arctic/Antarctic marine resources
- Understand the complexity of managing stakeholder interests during changing conditions



Figure 1: Resolving an Event in *Arctic Saga*

## Gameplay

*Arctic Saga* is a three to four player board game of strategy, resource management, and negotiations. Players will explore territory, create a network of developments for profit, and withstand nature's fury for not developing green technology and preserving the environment. To avoid such disasters, players must negotiate and resolve game events and player-motivated developments in consideration of the current environmental climate (see Figure 1). The game ends when the environmental damage reaches its peak, or when a player first earns seven victory points. Players can score victory points in two ways: 1) by developing on territories they control or 2) achieving secondary victory point objectives.

Players embody the roles of stakeholders with an interest in the area: Oil, Shipping, Fishing, and Tourism (see Figure 2). Also present is a collaborative environmental preservation mechanic where players must work together to preserve the environment. As players acquire materials and resources, they will often negotiate with other players to improve their own standing via trading. *Arctic Saga's* endogenous mechanics, such as territory placement, negotiations, and environmental conditions, are largely based on actual science and reality (see Figure 3)

(Paras & Bizzocchi, 2005).



Figure 2: Initial proofs of stakeholder character screens

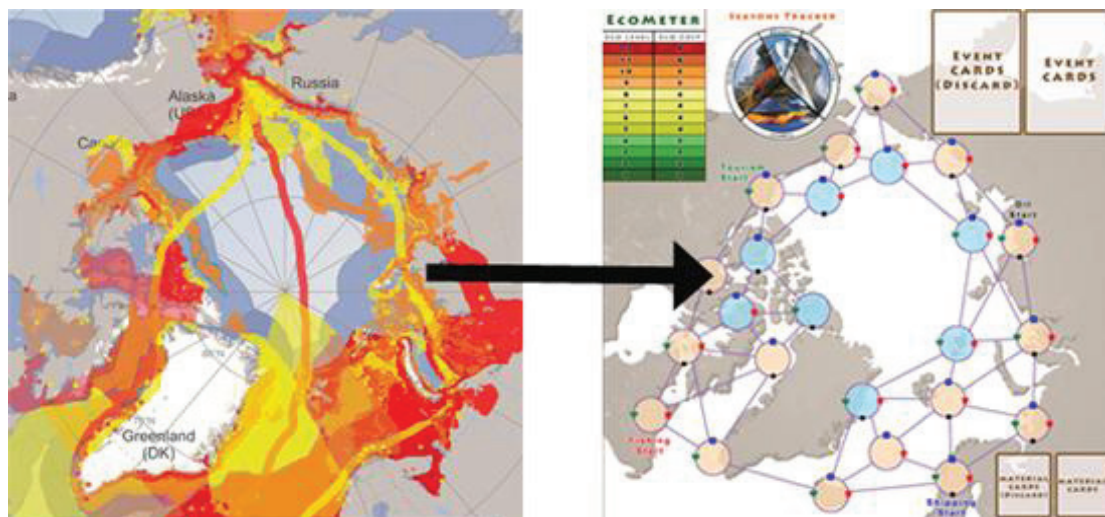


Figure 3: Evolution of the game board reflecting real-world stakeholder interests.

## References

- Bizzocchi, J., & Paras, B. (2005). Game, motivation, and effective learning: An integrated model for educational game design.
- Mayer, R. E. (2005). Introduction to multimedia learning. *The Cambridge handbook of multimedia learning*, 1-16.
- Salen, K. (2004). *Rules of play: Game design fundamentals*. The MIT Press.