

## **2011-12 Future Problem Solving Topics**

### **Practice Problem 1 – All in a Day's Work**

Mobile phones, laptop computers, and the Blackberry have changed where and when people can do work. Gender equality in the workplace has altered traditional notions of who should be at home and when. Globalization has led to increased competition and more business interactions across time zones - meaning longer hours at work for many. Is the forty-hour workweek a relic of the past? What impact will longer work hours and increased telecommuting have on families and on mental health of children and adults? Several countries have tried to mandate maximum work hours and minimum vacation time, but such policies can lead to higher rates of unemployment and other negative economic consequences. Will workers in the future, even well-educated ones, be able to succeed financially yet still manage to enjoy free time alone or with friends and family?

### **Practice Problem 2 – Coral Reefs**

Coral reefs are sometimes known as "the rainforests of the sea." Reefs are some of the world's great tropical and sub-tropical ecosystems. Coral reefs support the livelihoods of millions of people. Worldwide, already 25 percent of coral reefs have been destroyed or badly degraded and some scientist predict that by 2020 up to 70 percent might be permanently lost. These are areas rich in marine species that are found only in a small area. Therefore, they are highly vulnerable to extinction. They supply seafood, building materials, sources for medicinal products, and draw in much needed tourism revenue. Reefs also protect shorelines and communities from storms and erosion. Coral reefs are deeply threatened by human activities and global climate change. Coral reefs are an important source of food for hundreds of millions of people, many of whom have no other source of animal protein. However, especially reefs in developing countries are threatened and if human impact on reefs is not reduced there is a great danger that some of the world's poorest people will lose an important source of nutrition, and in many cases, their livelihoods.

### **Qualifying Problem – Human Rights**

Since the end of World War II, many people have prioritized the protection of human rights around the world. But what exactly are human rights? Do they vary depending on religion and culture? Many western countries criticize the Islamic world for its treatment of women, while the United States is often condemned for its use of the death penalty. Can one nation fight to protect human rights in another nation, and if so, how? What challenges do globalization and the prevention of terrorism present to the preservation of human rights in the future?

### **State Bowl – Trade Barriers**

Historically, states have relied on trade barriers - such as subsidies for domestic producers, import quotas, and tariffs - to protect domestic economic interests. Many economists have long argued, however, that such barriers can limit potential economic growth, may only benefit certain politically powerful groups like labor unions, and have other harmful effects. To combat these concerns, policymakers around the world have created new treaties and institutions, such as the World Trade Organization, on the theory that reducing trade barriers will increase economic prosperity. But others argue that the benefits of tearing down trade barriers means fewer jobs and lower wages for farmers, factory workers, and relatively less-educated employees. Should policymakers strive for Free Trade or Fair Trade in the future - or some balance of the two?

### **International Conference – Pharmaceuticals**

Many people rely on modern medicines to stay alive and well, but others are not as fortunate. Should countries have to respect intellectual property rights causing citizens to pay for drugs at prices they cannot afford? Are pharmaceutical companies earning too much profit? How do we sustain pharmaceutical research and development without incredibly large prices and profits? Are therapeutic products going too far in developed countries? It is difficult to understand why medicines for diseases that tend to afflict poorer countries - which are often relatively simple and cheap to develop - are neglected while there are drugs readily available for trivial issues such as cosmetics. Are people becoming too dependent on medications? One study in England concluded that over 50% of antibiotic resistant microorganisms are the direct result of the excessive use of antibiotics in intensive animal farming (i.e. battery chickens) and in human medicine as well. We're now encountering the effects of overuse of antibiotics in diseases with resistance to multiple antibiotics which are limiting the ability of modern medicine to cure disease. What other consequences may result from mankind's addiction to medicine in the future?