Future Problem Solving Program Australia Inc

Champion Booklet

Junior Division: 2001

Topic: Habitats

School: St Peter's College, Adelaide, South Australia

Step 1. Brainstorming Possible Challenges and Problems

1. In 2025, many people may lose their jobs as ecotourism in the Great Barrier Reef is reducing due to the damage of the GBR.

2. In 2025, due to the sonic drilling and pollution in the GBR, fish that only live off the coast of Queensland may becomes extinct as a result of the drilling and pollution.

3. In 2025, The Great Barrier Reef is surrounded by pollution that may in the future spread into the Pacific and other major bodies of water, thus becoming an international problem. This means that the major bodies of the water, including the Pacific Ocean, will be of no use.

4. In 2025, the water around the GBR is polluted and contains a lot of oil may be a problem, if the sonic drilling goes out of control and splits the ground of the continent, oil and pollution may leak into the Great Artesian Bore and other aquifers, which could drastically decrease the water supply of Australians, since the water would be polluted.

5.In the article by Ellen Licking, "They're here and they're taking over," it is explained that Chinese long-horned beetles were brought to the US by industry packing materials. They then destroyed 1000's of trees. The Sonic Drilling of the GBR could also bring unwanted pests that could destroy the already fragile GBR.

6. The GBR has been polluted and industrialised and less people visit. It may become unprofitable to run a coach or flight business. Transportation for people living in rural areas would be adversely affected because if less people run transportation businesses then they might become extremely isolated

7. The Biodiversity paper from the Australian Government said over 80% of land able to be used for agriculture is already cleared. This shows that extensive amounts of land is used for cropping and the herbicides from this land further affect the GBR. This may be a problem because the farmers may have to change to a different and more expensive herbicide, thus making their profit margins smaller.

8.The GBR is extremely polluted and fish still dwell in the area. With the migratory habits of many fish, moving south could mean that they were caught either a commercial or recreational fisherman. This would mean that these fish would be riddled with pollution. That would mean that the consumer would take in a huge amount of poisonous matter when eating the fish.

9. In 2025, both trying to protect the GBR and the decreasing ecotourism may be expensive. This will effect the Australian economy, which may effect the Australian people for example, through recreational and educational allowances.

10. In 2025, since the water around the GBR is polluted, fishing companies, especially on the East Coast of Australia, may be effected, if the pollution spreads further, thus poisoning the fish making fish worthless. Since the companies won't have any profits they will bankrupt.

11. In 2025, due to the abolishment of the Great Barrier Reef Marine Park Act, not just oil miners will come to the reef. This may be bad for the reef as these people may do things that are bad for the GBR.

12. In 2025, due to the sonic drilling used to mine oil, an underwater earthquake may occur. This may destroy the GBR, because of the movement of the water and earth that may split it.

13. The sonic-drilling in the GBR could not only break the sea-floor but also the side of the continent. The oil could seep through the side of the continent and into the ground water. Since oil has a lower density level than water, it would float on the top of the water table and plants may absorb the pollution from soil which has also been infected.

14. Since the Oil companies are taking most of the blame for the disruption of the GBR, groups such as Greenpeace may thwart oil riggers carrying oil destinations.

15. Due to the sonic mining, after a certain amount of mining the coral reef may collapse in the year 2025 and beyond. This collapse may destroy the coral reef.

16. In 2025, the constant sonic drilling may directly affect the GBR. It may shatter reducing the natural wonder to almost nothing. This will be bad for it as it may constantly be shattered, thus damaging it permanently.

Step 2. Identifying an Underlying Problem.

The Great Barrier Reef has been adversely affected by environmental and industrial factors, as well as a lack of legislation, (as stated in the future scene.)

How might we balance the needs of either or both industry and the environment, so that the problems are reduced for the parties in the year 2025?

Step 3. Brainstorming Alternative Solutions

1. We from FPSITF think that we should, in an advanced method use the technology stated in the article from the Advertiser September 22nd edition 2001 by A Doland about the distance robot surgery of removing a gall bladder, to protect and guard all the species of life in the GBR while letting industry function normally in the year 2025.

2. We from the FPSITF think that in the year 2025 and beyond, a bubble sheet that is sound proof should be placed to protect coral in the GBR, from harmful soundwaves, leaving industry unharmed.

3. We from FPSITF think that Marine biologists should be educated so that they can help the life of the GBR without upsetting the industry in the year 2025 and beyond.

4. We from FPSITF think that the machine used for sonic drilling, be modified so that the hole in which the oil comes out of be reduced to a size of one thousandth of a centimetre by the fish and coral in the GBR in the year 2025 and beyond.

5. We from FPSITF think that in the year 2025 and beyond by using the idea of Claude Morgan's Idea from talking turkey in the reference booklet of a rocket powered net but instead of using a net we will use a special silicon net to catch the oil before it spurts out not giving it a chance to harm the coral.

6. We from FPSITF think that in the year 2025 and beyond water should be purified before it comes in or out therefore collecting all the excess oil which will give the industries more oil and the coral better water.

7. We from FPSITF think that, in the year 2025 and beyond special plants should be grown near coral s o that it absorbs the oil therefore preventing them from getting harmed.

8. We from FPSITF think that in the year 2025 and beyond the sonic drilling machine should be used in the water so that it can also be used to collect the oil therefore causing minimal harm.

9. We from FPSITF think that in the year 2025 and beyond, the special hardening agent named hard and fast should use there products on the coral to harden it, therefore protecting it from the sonic drilling in the great barrier reef.

10. We from FPSITF think that in the year 2025 and beyond the drilling workers at the great barrier reef who are actually drilling should be educated into learning how to drill with the sonic drill and yet have pin point accuracy to minimise the damage to coral.

11. We from FPSITF think that in the year 2025 and beyond the company KKP should make a microscopical robotic spider device which is one millionth of a millimetre in size to be sent to where the drilling at the GBR is being done and to teleport the oil out.

12. We from FPSITF think that in the year 2025 and beyond that from Jennifer Lenheart's Idea of moving houses away from trees, the industries mining oil from the GBF should be relocated therefore not harming any of the coral.

13. We from FPSITF think that the coral in the GBR should be transported using an incredibly large teleporter, to a climate exactly identical to that of the GBR in the year 2025 and beyond.

14. We from FPSITF think that a law should be placed that all drillings must occur in an environmentally safe manner so that both the GBR and its living and the industry are still prosperous in the year 2025 and beyond.

15. We from FPSITF think that a combined power of oil miners should remover all the oil in one go and distribute it by the amount of equipment contributed so that the mining will stop and the GBR can go on again peacefully like it was in the year 2025 and beyond.

16. We from FPSITF will invent a artificial bubble that floats in between the coral and picks up all waste and pollution in the water thus decreasing the dangers of coral dying in the GBR in 2025 and beyond.

Step 4. Choosing Criteria for Evaluating Alternative Solutions

1. Which solution will be the most effective in protecting the GBR in 2025 and beyond?

2. Which solution will be the most friendly to both industry and the GBR in the year 2025 and beyond?

3. Which solution will be the most friendly to the GBR in the year 2025 and beyond?

4. Which solution will be the most friendly to the Industry in the year 2025 and beyond?

5. Which solution will be the quickest to solve the problem of the GBR in the year 2025 and beyond?

Step 5. Evaluating Alternative Solutions

Sol'n #	Alternative Solutions	1	2	3	4	5	Total
# 11	Microscopical Device	9	10	9	10	10	48
# 9	Hardening Agent	10	8	7	7	2	34
# 12	Industries relocated not harmful	2	2	8	9	1	22
# 13	Coral Teleported	1	9	6	6	9	31
# 16	A.I. Bubble	5	7	10	8	3	33
# 15	Combined Powers of Oil Miners	3	1	3	2	8	17
# 1	Robot Protector	8	6	4	1	4	23
# 2	Bubble Sheet	7	3	5	5	7	27
# 4	Sonic Drilling Modified	6	5	2	3	6	22
# 3	Marine Biologist Re-educated	4	4	1	4	5	18

Step 6. Develop an Action Plan.

We from (FPSITF) think that the best solution to the problem in the GBR is to bio-engineer a microscopic spider-like creature to extract the oil. The spider would be a millionth of millimetres big that would drill a miniature hole, then crawl down the hole and begin to suck up the oil, while automatically teleporting it back to the oil rig that it came from. The microrganism would have a minute explosive charge, so that after a certain time the organism would be destructed. The creature would be unable to breed, (because of the way it was engineered). The organism never would live long enough to cause any harm to the reef, (such as eating or living on coral). The spider-like creature electronics would not be expensive, because once made the organism would be cloned instead of being made again and again. The creature would not ever do any harm to the coral or reef.