**Domes:**

* “Mother” Dome
* “Rainforest” Dome
* “Ocean” Dome
* “City” Dome
* “Farm” Dome

Mother Dome:

Overview of all the different domes and their influence on eachother.

Farm Dome:

Actions + their effect

* Burn farm waste
  + Effect: Creates smoke > People in the city get sick from the smoke + Soiling surfaces+Crops get polluted
* Bury farm waste
  + Effect: Contaminates water+soil > People in the city get sick
* Transfer farm waste to station
  + Effect: waste gets recycled
* Surface irrigation
  + Effect: More water is used, less food in the city
* Conventional drip irrigation
  + Effect: Less water used, more food in the city

Farm waste

* excess pesticides and fertilizers leaching to water and cause life in the ponds and lakes to die due to lack of oxygen
* heavy metals like mercury
* toxic elements like cadmium and selenium can accumulate in plants and livestock
* silage (compressed, watery waste plant matter)

Water uses on farms

1. irrigation for watering cropland
2. water for livestock feed
3. aquaculture on fish farms
4. pesticides and fertilizers

Methods of watering crops

1. surface irrigation
   1. efficiency of only 40-50%
   2. requires more water to be available in order to work efficiently
      1. improvements?
         1. automation or irrigation
         2. making small dikes in the land
2. conventional drip irrigation
   1. 70-90% efficient
   2. 1.6 to 2 times less water used that surface irrigation
   3. allow more crops per unit water to be grown
   4. can function in regions where there is less water available
   5. more expensive for all farmers to put into action

1. low-cost drip irrigation
   1. cheaper than conventional so can be applied by poorer farmers
   2. more efficient in delivering water (70-90%)
   3. higher yield than both surface and conventional drip irrigation

**Ocean Area:**

Actions + their effect

* **Dumping** (involves depositing all the waste materials from factories and industries, tankers and ships and sewerage waste materials into the oceans and seas)
* **Ballast Water** (tends to proliferate and transfer organisms that debilitate the growth of naturally occurring fishes in a particular oceanic area.)
* **Land Runoff** (non-point pollution: wastage materials such as the debris of cars and boats. Moreover, rivers during floods pick up harmful contaminants including fertilizers, petroleum, and pesticides, among others. Studies have suggested that the presence of fertilizers in the ocean will result in the sudden explosions of marine algae, which can disrupt ocean ecosystems, and also the creation of dead zones in the waters.)
* **Oil Spills** (from tankers and offshore rigs. the main victims of oil spills are birds and mammals. Also has large effects on society, both economically and environmentally.)
* **Littering** (non-degradable, so animals will choke on it which causes a steady decline in their population)
* **Ocean Mining** (they dispose of their wastes in the ocean, creating disastrous impacts in the marine life on the seabed)
* **Noise Pollution** (the increased traffic and the loud sounds from sonar devices and oil rigs. will disrupt the migration and reproduction patterns of mammals.)

**Rainforest Area:**

Actions + their effect

* **Acid Rain** (due to growing industrialisation)
* **Air Pollution** (due to cities and growing industrialisation)
* **Oil** (extraction of oil is responsible for the deforestation, degradation, and environmental devastation. results in the release of toxic drilling by-products into local rivers, while broken pipelines and leakage result in persistent oil spillage)
* **Mining Accidents** (frequently a destructive activity that damages the rainforest ecosystem and causes problems for people living nearby and downstream from mining operations)
* **Tributaries Dumping** (trash and human waste from overcrowded cities)
* **Fertilizers and pesticides** (including critical pollinators and seed dispersers. Overuse and misapplication of nitrogen fertilizers can cause "dead zones" of low oxygen content in river deltas and the ocean)

**Farm Area:**

Actions + their effect

* **Oil Spills** (Economical: Extreme decrease in seafood, damaged gear, less tourism/recreation, decrease in clean water for industries > contamination of piping systems. Health: inhaling, touching, eating can cause sickness)

**City Area:**

Actions + their effect

* **Oil Spills** (Economical: Extreme decrease in seafood, damaged gear, less tourism/recreation, decrease in clean water for industries > contamination of piping systems. Health: inhaling, touching, eating can cause sickness)
* **Littering** (bins overflowing before collected > bad for health and environment. Also causes air pollution, contaminates surface waters)