**Game Design Document**

**Unity version: 2019.2.3f1**

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# Full game description:

Base game: When you start the game there’s a menu with a start menu and a quit button, when you press play you get to the game. You have a ship you control in all 4 directions as the ocean moves under you so you keep moving like in a bullet hell, you move towards the trash(green) to collect it and hitting rocks(gray) gets to a game-over screen. This has a retry option that just reloads the level and a menu button.

After this is the income and capacity system. First we need levels and then a way to transfer upgrades between levels. The end screen should now have a next level and the main menu should have a level select. After you reach your trash capacity there should be a return to port menu that pops up, where you can sell your trash, view your money and spend it on upgrades to the: ship speed(Left & right), collision size for picking up trash, as well as ‘power-up’ buttons that activate a temporary power-up. One is a super expensive net that temporarily catches everything on the screen when activated. The other is a temporary super-speed buff. There’s also a buff that makes your ship stronger so you can accidentally hit rocks for the duration of the buff. Each buff lasts 5 seconds. There is also a passive income referred to as the fleet that you can upgrade infinitely to just keep adding income to it.

Start with building 5 levels, one for each trash patch. Each level ends when your trash capacity is full, and goes to the aforementioned end screen. After that we can start expanding it into 5x5 levels.

A final level to add would be the endless level where you can earn the money to upgrade your ship to the max. If magically we have a Lot of time left, the next trash capacity would upgrade you to a space ship and we can start cleaning space debris, but that’s a mega extra epic stretch goal.



Features, in order of most to least important:   
Boat movement is in all 4 directions and follows your finger/mouse whilst the map keeps moving forward, aka you keep moving like in a bullet hell. base game environment, the ability to collect trash.  
A stat for tracking trash and a maximum trash stat + a screen that gets activated once you fill up your max trash.(End screen/shop screen later once we have a shop)  
Objects that you can crash into + game over screen once you do.   
An income stat.   
A button to sell trash for income at the end of a level.   
Levels + level select on main menu.  
Ship model changes every 5 levels(Aka every new zone)  
Your trash capacity upgrading with each level.   
The ability to buy ship upgrades(Spend income) + 5 bars beneath each upgrade icon that show that it’s been upgraded   
Ship upgrade 1: Speed buff(Can buy up to 5 times) that increases the speed of moving left/right by an extra 10% of base each time(So 100% = base, 1: 110, 2: 120, 3: 130, 4: 140, 5: 150) potentially more if its more fun later on.

Ship upgrade 2: Collision size for trash collection, makes the circle around you in which you pick up trash bigger.

Ship upgrade 3: Power-up button, which has 3 options you can buy:  
Speed buff that increases your left/right speed to 170% temporarily.  
Collision buff that makes you collect trash on the entire width of the screen.  
Invincibility buff that makes it so rocks can’t kill you.

Infinite upgrade: Passive income, this will just give you income over time as you are playing the game. Players can spend infinite money into this. A number in the corner of the icon shows how many times you’ve upgraded it already.

# Assets list:

## Graphics:

5 boats, going from small to big(Talk to Olivier)  
Trash: Individual items that we can put together in prefab  
10 items in total:

* Plastic bottle(clear, green, yellow)
* Crumpled up net
* Plastic sheet
* Dropfender
* Brown muk patch
* Wooden plank
* Floating pot
* Metal ring

7 Rock models:  
Fully stone round boulder  
Fully stone spikes sticking far above the water  
Two smaller fully stone spikes sticking out together  
A heap of multiple smaller rocks in a pile on top of each other  
Large stone boulder with green moss on the top  
A bunch of small rocks gathered together with moss  
One large rock surface sticking out of the water with moss on it

5 Sand bank models:  
5 varieties of sand barely sticking out, a little bit submerged, textures can be similar  
   
2 Tropical island models: Make sure the sand is more lightly coloured than the banks(Banks get submerged, tree island wouldn’t)  
Little sand bank with one tree  
Sand bank with two tree  
  
5 skies that are slightly different(Wait for Olivier’s moodboards)  
  
Water textures(Check Trello)  
  
Logo  
  
Menu buttons:

* Start
* Level Select
* Next Level
* Restart
* One icon for each garbage patch(Maybe location of each on the globe?)

Upgrade Buttons

* Ship Speed icon(The ship with waves going behind it and speed lines)
* Ship Collection Trash Size icon(The ship with a circle around on it, there’s arrows on the inside of the circle pushing outwards)
* Powerup icon for speed increase(The ship with waves going behind it and even more speed lines, the ship is tilted slightly upwards)
* Powerup icon for collection net(A fishing boat crane with the net deployed)
* Powerup icon for rock protection(The tip of a shield with metal plating on it)
* Infinite fleet upgrade icon(A bunch of small ships + a few drones together)
* An empty bar + green variant that fits 5 times in an icon to show that it’s been upgraded

Money icon(Like a dollar, since it’s international)

The three buff effects:

* Speed lines for the speed effect
* Net on the bottom of the screen for the net effect
* Glow around the boat for the shield

## Audio:

5 different constant boat engine sounds  
Music: (Check with Olivier for moods for each patch)

* Menu music
* Patch 1 music
* Patch 2 music
* Patch 3 music
* Patch 4 music
* Patch 5 music

Trash pick-up sounds(Crumpling maybe?)  
Boat horn for start  
Clicking on buttons sound  
Upgrade sound(Maybe some kind of construction equipment?)  
Crash sound(Stretch goal: 3, one for rocks, one for islands, one for sand banks)  
Sea sounds(Such as the waves, the wind, potential for birds for some of the oceans(Not all, some don’t have birds)  
Sound of an engine going super fast(Speed buff)  
Sound of a net deploying  
Sound of a shield(Maybe a hammer hitting something?)