

# Catchment Role Play



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**Purpose:** The catchment role play takes you on the journey of a water droplet from the top of the catchment to the ocean.

**How to play:** While the role play was designed to focus on the Great Barrier Reef, you can adapt it to suit your catchment by changing, adding or removing characters. The play is designed to be modified and customised to ensure your key messages are communicated to the students. The play is dynamic and the script should be a guide—use the wording and the landuse and activities you need.

It is a good idea to begin the role play with a discussion about the students' catchment, looking at a satellite image and a topographic map with the catchment boundary shown.

## Discuss the following concepts:

- What is a catchment?
- What is a wetland?
- What is riparian vegetation?
- What do you think the water droplet should experience?
- What activity/landuse is dependent on water for it to occur?
- What activities/landuse happens in the catchment in which we live?
- Why are we dependent on this industry/activity (good)?
- What impact does this industry/activity have on water (bad)?

At the end of the role play, discuss what we can do as individuals and groups to protect the water quality—'make it clean and healthy'.

## What will you need to play:

- Blue water droplet cape—it should be felt (or similar) to allow the droplets to be Velcroed on during the game.
- Headbands for each of the key activities for your catchment (students can have multiple roles if you do not have enough players). Activities will vary from catchment to catchment

**Acknowledgement:** *The Great Barrier Reef Marine Park Authority and Townsville Central State School who presented the catchment role play at the International Youth Coastal Conference held in Townsville October 2008 .*



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Hi, I am a water droplet! I have just fallen at the very top of the catchment and I feel so fresh and clean! I'm ready for an adventure which I am hoping will take me to one of the seven natural wonders of the world – The Great Barrier Reef! I can't wait! Off I go! Yippee! Oh, here comes my first adventure...



Hi! I am a National Park, home to plants and animals. I have been protected because I am special. I show the community my natural beauty and allow people to have a wilderness experience. People love to explore and relax in me. But I do have some problems... Sometimes animals that live here in the National Park cause dirty water... Meet Miss Wild Piggy...



Hello, I am a water droplet on an adventure travelling to the Great Barrier Reef, what are you doing in the National Park? How do you use me?



Oh hi, I am Miss Wild Piggy! I need to find food and water in my friend the National Park – something my friend specialised in. But I dig up plants near waterways. I muddy the water, leaving behind nutrients from my wee and poo... I am a messy pig!



Oh my I am not so clean and fresh anymore, you are a messy pig! I now have dirt, nutrients and poo and wee in ME... Oh Yuck!



Hi, I am travelling this great country and have stopped in this lovely National Park. I am exploring its beauty and going where no-one has gone before, just me and my bus and my pets. Sometimes I illegally dump my poo and wee because I have my own toilet in this great bus and it gets full. I also bring my cat and dog to explore with me, they also wee and poo! I leave rubbish and transport weeds from one place to the next. Oh I love this country.



Oh I am getting dirtier and dirtier – I have only just started this journey! MORE sediment, nutrients and pollutants... Oh Yuck! I really must get to the Great Barrier Reef soon because I am feeling a little sick. What is that up ahead? Ohhhh.....

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Hi, I am the Dam- I provide water for us drink and live. People come here to play in me to go boating, camping, fishing and jet skiing...but they leave rubbish and pollutants behind. I stop natural flows and destroy wetlands – ha ha ha ha..... So you will have to have my sediment, nutrient and pollutants. Enjoy!



Is there anyone who can help me take some of this sediment, nutrients and pollutants? Oh Yuck!! Please get me to the Great Barrier Reef soon, I am beginning to feel even more sick. What's coming up next?



Hey water droplet, how did you get down here? I've been trying to get upstream for the past couple of weeks but I just keep banging into this cement wall. The water here is not very nice and I am struggling for a breath, where is all the oxygen gone? Where are the snags on the sides of the river to hide in and take a rest in? Why is this water so murky? How am I ever going to get upstream to have my babies? Can you help me?



Hi, sorry to hear you are having trouble getting up the river to spawn (have babies). The cement wall you are hitting is a dam! Humans built it to capture water for their use. It is a pity that they have not thought to put a fish passage on this dam to help you.



Enter Ms Wetland ...Welcome water droplet! Come into my home, slow down relax while I clean you...Oh you are very dirty, where have you been? I can take some of your sediment, nutrient and pollutants but I cannot take all of it. I used to be bigger but I am a lot shallower now because of sediment flowing in from farms nearby. I used to have a lot more riparian vegetation (the trees and plants you see around the waterways, creeks and rivers) which captures the dirt during the rains. But as the landuse becomes more intensive the trees and ground cover become less and less and my work gets harder and harder. I am sorry water droplet, I would love to filter you properly but that is just not possible.



Thank you, what a pity that the wetland isn't bigger so she could function like she is suppose to, and take away all of this sediment, nutrient and pollutant that has been given to me...Oh well at least some of that YUCK is gone. I must continue on my journey, I hope it gets better as I travel down the catchment.

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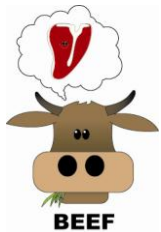
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Hi! I am a Sugar Cane Farmer - I provide sugar for all the food we eat! Everyone loves sugar... But sometimes the things I do on the land have an impact the waterways and creeks. As a farmer I clear the land taking away the trees and increasing erosion. Chemicals and fertiliser are used and they get washed off the land into the creeks and streams. I try to do my best and do plant trees where I can but I still have to clear some of the land for my sugar cane to grow.



Hello, I am a water droplet on an adventure travelling to the Great Barrier Reef. I am not sure if you know it but I am a little dirty as a result of my travels... but I am learning that everyone seems to need me...How do you use me?



I am a beef farm, I graze cattle and provide beef for the community to eat. I have a lot of pressure to provide good meat at low prices, and I have to run more and more cattle to meet demands. So my cattle need lots of fresh clean water to drink, but my animals have impacts on the waterways. They do their business like we all do but during rain it washes into the waterways. Also the land has been cleared and the animals eat the grass and ground cover which means much of it is bare... This means that dirt and nutrients go into the water and causes algae to grow.



Oh my I am getting very dirty again! The job of travelling to the Great Barrier Reef is dirty work! I know these industries need me but I also need to be clean and healthy for the animals and plants that depend on me. If I get too dirty then native fish cannot survive, and I end up with lots of pest species in me – which are of no use to anyone! But I am learning that everyone needs me...How do you use me?



Hi I am a Dairy Farmer growing milking cattle, producing milk and its by-products like cheese, cream and yogurt for the community. But... like the grazier my cattle have to do their business and these nutrients end up in the waterways because some of the land has been cleared. I have had to clear the land of trees to make more room for my cattle, and that means some pollution goes into the waterways.



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More sediment, nutrient and pollutants, I am a very dirty water droplet after my travels! Oh look I see another wetland, yippee! Hopefully I will be clean soon...

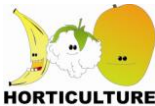


WETLAND

Welcome water droplet! Come into my home, slow down and relax while I clean you...Oh you are very dirty what have you been doing? I can't clean that much dirt and pollution! I was much bigger once but I had to shrink to fit in farms and development



Thank you! I appreciate your help to get me to get clean, you really do play an important role in improving the quality of water flowing to Reef. I can continue my journey to the Reef now. Thanks again, goodbye!



HORTICULTURE

Hello, I am a horticultural farm and I grow all the fruit and vegetables we like to eat. I do need lots of water and as well as fertiliser to make nice fat and delicious food! I do have to add some herbicide to make sure that bugs and weeds are not a problem. This means that sometimes when we have big rains these run off into our waterways.



Oh my I am getting dirty again! This keeps happening; gosh will I ever reach the Reef and be clean! Seems everyone needs me but I keep getting dirtier.



EEL

Hey water droplet, I am glad to meet you. I have become slimier than I normally am. I don't mind if there is a bit of nutrient and sediment in the water – but what is it with these pollutants and toxic stuff? Cough... Cough... Splutter... I just feel Yuck, where is the clean water? Who is responsible for this muck?



I have met the things responsible for the muck on my travels so far! I am sorry I am dirty but I can't help it!



ROADS/RAIL

Stop water droplet – you cannot go over me, you must go under my bridge because I block your path with my roads and tracks! I have an important job to move people and commodities around this country. I do have some impacts on the water quality as people drive on me, leaving behind rubber, dirt, oil, petrol and diesel. Sometimes the drivers (even drivers on the streets in town) throw their litter like cigarette butts out their windows! All of this flowing into the water is making you dirty..

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Oh my I am getting dirty again! I can feel the oil on me. Why do people think they can dispose of their rubbish out the window and dump rubbish into the waterways. Yuck!



**MINING  
OPERATION**

Hello, I am the Mining Industry. I clear the vegetation in order to mine minerals. I dig into the earth and use water to process the minerals. I use large machinery which cause erosion and leave pollutants and toxins into waterways and creeks. I didn't use to rehabilitate my site but now when mining is finished I am replanted with native trees and monitored to make sure I am not impacting the environment.



I am glad you are working on putting back the trees and ground cover because without these measures I would be in a terrible way. Waterways are not for polluting, too many plants, animals and humans rely on me for survival. Bye.. I must be nearly at the Reef – this is exhausting!



**WETLAND**

Look at you! Stay a while - you need to clean up before you get to the great Barrier Reef. You do know you are about to enter a quarry and the urban area though don't you? I am sure you will be dirty again in no time...



Thank you, I have been surprised at how important I am to everyone. It seems that the solution to pollution is dilution – but that really is not the case! I can only do so much for everyone.



**QUARRY**

Hi, I am a quarry and I need to clear the land and dig up the earth to use to build our roads, infrastructure and towns. I need to use heavy machinery and fuel to do this. I change the landscape and the direction the water flows across and under the ground. I use a lot of water in my daily operations.



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Oh filthy filthy filthy – this journey has not been what I expected! Whats this ahead?  
Must be the urban area.



Hi, I am the urban area, lots of people live, work, play and go to school in me. People in urban areas need and use a lot of water, you are part of everyone's lives here and often they never even consider that you are precious. Everyday things that people do make the water dirty! Flushing the toilet, washing themselves, clothes, cars, dropping cigarette butts, litter, not putting their rubbish in the bin... I'm so sorry water droplet, people in the urban areas can be really naughty.



Gosh there is a lot of pressure on water at the bottom of the catchment. It seems that most of the population is here near the coast and they need me to be part of most of the things that they do. They really depend on me to survive. I hope they learn how to minimise the impact they have on me.



Oh... but wait... I am the waste water treatment plant; my job is to clean the water before it flows to the Reef. I am under constant pressure to treat more waste as the urban area continues to grow. I am sorry but I can't treat all that dirt because this city is growing bigger and bigger! And it costs a lot to make me bigger and better.



You really are important, all urban areas need to consider your size and what you can cope with to make sure that you can manage the waste that gets created by the humans that live in the urban areas.



Hey I am a frog and have I had a tough time trying to find clean water and a nice habitat to live in! I keep getting diseases and my family and friends are disappearing. When the environment isn't in balance I am a good indicator that things are crook. I seem to be losing my croak – I hope you can make a difference.



Hey Mr frog, I have had a journey of a lifetime and have passed by so many industries that depend on me. The habitat you are talking about is becoming more and more precious as we build places to live and food to eat. The places you need to survive are becoming less and less. The demands on me and the lack of large wetlands to assist in cleaning and slowing my flows are causing you to be stressed. I hope that people can learn to take better care of me and know I am a precious resource.

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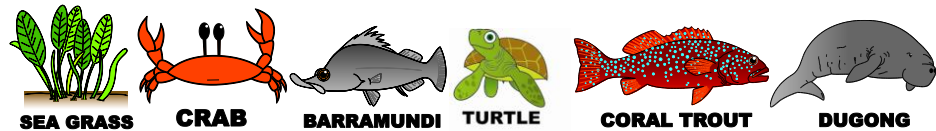


Hi, I am the airport! I am essential for moving people and goods around. I was often built in the areas that were once called wetlands! They used to be considered useless, stinky, smelly places. The airport was much more important. But now I hope they realise wetlands are really important too.



After the journey that I have had, I know how important wetlands are and the role they play in slowing and cleaning the water as it flows from the upper catchment to the Great Barrier Reef. I know you are important too and we need our airports to provide transport and essential services. It really is a juggle to make sure nature is included in our developing catchments.

I see the Reef up ahead and I am dirty but finally I have reached my destination. Yippee... Nothing is going to stop me now..... I am here! Whoosh, oh NO what is happening? The seagrass has been covered, there is no food for the dugong, the crabs are dying, there is no food for the coral trout and the turtle. What can I do?



**REWIND.....**(water drop moves back up catchment and is behind the mangroves who one by one take off the sediment, nutrient and toxic drops, till the water drop is clean).

I know, lets put the wetland and mangroves back along the coast and I will flow through these environments and get clean before I enter the Great Barrier Reef Marine Park.

Also people in the urban areas can help me by putting all their rubbish in the bin.



Finally I am clean and as I enter the Great Barrier Reef Marine Park I can *Help Keep it Great!* Yippee