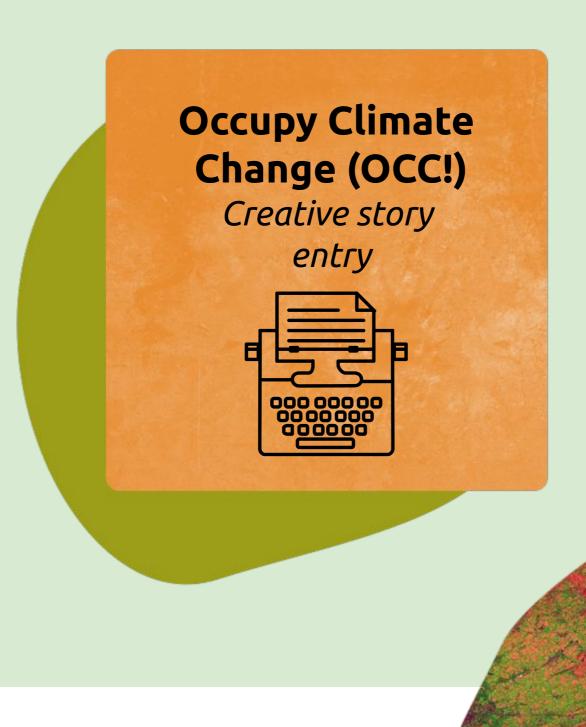
Title:

Author:





ENVIRONMENTAL HUMANITIES LABORATORY





Part One: Journey to the Wastelands

Written by Rahul Sharma

Geolocation: Kanpur, India

Anita

She came after the *suns* exploded, and as the long winter began. The community elders were stupefied at her appearance: *bloodshot-red eyes, spiked green hair, pale skin, brown and lead-coated nails*. They knew Komal was different. The matriarchal priests would often chant *mantras* rooted in the *lost-century eras* but to no avail. The *ayurvedic* priests prepared several concoctions stored in glass bottles from the previous century. They brought her voice back. Yet, it sounded more coarse and husky than the other girls.

One fine morning when a glimmer of sunlight pierced through the snowing skies, Komal's mother, Anita, took a ten-kilometre walk through the wastelands that formed part of river Ganges. On the fringes of the slippery-iced ground, mushroom pods were being neatly stacked up by a man named Bhagwan. He was breathing through a ventilator, donning dark goggles. Bhagwan was an innovator whose early experiments resulted in the regrowth of cauliflowers, carrots, wheat and potatoes. Lack of water meant that rice was still a distant dream. Anita had pinned all hopes for Koma's cure onto him. In fact, he was a messiah for the villagers and even beyond.

In a quirky, off-handed manner, Bhagwan took Anita into a dingy and lowly lit room with candles. He was saving plant-extracted fuel for the harsher months of the year. Several handmade and previously sourced maps decorated the wall.

"This..", he exclaimed jubilantly, "...is the future. That is where your daughter must go. In the middle over here. My sources have informed me that special herbs called *cacti sea-berries* grow here."

"And will they help treat Komal?" Anita asked anxiously. Bhagwan nodded his head, although with pangs of uncertainty.

"I have researched this for the last decade. There is a slight possibility that my calculations might be wrong, but a traveller from the Global south said those in his region also inferred the same. When the suns came down and sickness began, the soil created a mutant plant from two old herbs that could wither away this strange illness many of us have. Even all of us have it, Anita. We all cough blood at midnight. According to old records, blood coughing was not common."

A bit perplexed, Anit said, growing impatient, "I think it was always common. And I've had it with your tales. Last time I let Komal travel, she came back sicker than usual."

Bhagwan pacified her and responded, "She was younger and more prone to the effects. Only alone, she can undertake this journey because she is immune to the effects. All of us will die miles before reaching the core. The core where the greatest sun exploded. She is the key to our future. To reverse the damages the elders did in fury. Maybe the rivers might even start flowing if we plant these herbs here, and the snow might go away."

Teary eyed, Anita retorted, "Stop! Stop with all this blabbering. Many in our village don't even trust your tales. The snow has been here since *dada* was born. None of us knew what went on before."

Bhagwan repeated calmly, "It's true, we don't know but must find out sooner than later. Listen, you must let Komal go. She is a smart kid and will navigate her way around. She even survived those three months you were not home, picking wild berries. She can live on them. I remember when my tongue tasted even one of them, I almost found myself close to death. Had it not been for the potions.."

Anita cut him, "Okay, I understand. I know she is special. But as a mother, I am scared. After all, where will she go? And how? She can't cross the great seas to reach the Wastelands, from the Midlands. Forget even making contact with the Northerners."

Anita looked at the map while formulating her thoughts. Huge leaps of land submerged in the sea near the Poles and extended all the way near the equator. All of these were called the Great

Islands, where the Northerners were rumoured to live in isolated tribes. Some even suggested that most of them were dead. No one in the Midlands had seen any of them before. Meanwhile, the Wastelands were uninhabited and mostly inaccessible creating a large divide between the two regions, currently populated by the last surviving humans. Bhagwan's bizarre suggestion that only special prodigies like Komal, who had developed a sort of chemical resistance to overcome hazardous terrain of the Wastelands, seemed more like a myth than reality to Anita. But she knew Komal's days were numbered if she didn't get a cure in time before her 15th birthday.

Bhagwan shook Anita from her preoccupations, "Listen to me. I will give her a special hazmat suit. One of the travellers from the Tengerin found it in a bunker." Anita hesitated but nodded, caught in dire straits.

Tengerin were a series of mountainous terrains, located north of Midlands often ridden with harsher winters. Its survivors camped amidst a hidden labyrinth of caves praying to mutated wolves, while adhering to the old ways of shamanism. Little did even Bhagwan know that there were other unmapped and undiscovered pockets of the world, where wider secrets of humanity's reincarnation secretly lay. But once he met a man from the Tengerins who travelled south and spoke of actual trees, the ones which existed in old recovered books. Bhagwan's curiosity and kind mannerisms to outsiders led him to accumulate valuables, treasures and mystic objects from across the globe.

And so it came to be known that Komal's journey towards the core of their newly established world began at Anita's behest. It was destined to be a feat, given radically plummeting temperatures and falling skies. Some admired Anita's selfless decision while others deemed her an unfit and reckless mother. It would only be much later when the herbs would be discovered and brought back by a traveller from the Great Islands, that she would be revered and worshipped. But Komal had a new destiny, and would come back to this part of the world only much later in her life.

Komal

A full snow cycle had passed. Clear, moonlight finally shone light at the edge of the midlands, drenched in white sheets of snow. Removing her hazmat suit, Komal checked her bag for

reserves. She pulled out wildberries and stale bread, once packed by her mother one snow cycle ago.

The endless sub-zero temperatures did not deter her confidence. Along the way, the coastal villagers had been kind to her. She was almost at the end of her mission. A week-long boat ride would take her to the Wastelands. She could reach the core of the exploding suns, without feeling its ill effects. Many from her village had died from radiation sickness simply journeying towards the coast. From here on, it got harder and harder.

She opened her sledbag, and removed Bhagwan's mechanically constructed boat which he had constructed with secretive spare parts assembled from an old nuclear station near their village. It resembled an old *Shikara* from the mythical land of Kashmir, according to tales and photographs passed on from her great-great grandmother.

Once Komal had finished assembling the boat and set sail, a strange melancholy led her determined heart ashtray. She could feel the water speak to her, in its strange, soulful manner. Through an invisible thread, it dragged the boat with its potent lifeforce, denying its waves to trickle its pieces asunder. Minutes turned into hours which turned into days. Melancholy turned into amazement. The end was near. Her breath was coarser. Her hands were jittery. Her legs did not stop shaking. She saw pieces of volcanic ash subdued within the water. A stranger creature, perhaps a mutant, jumped onto the boat. It half-resembled a wolf but also had fins at its back. A fish-wolf, Komal reckoned. It licked the legs of her hazmat suit. She petted him with delight. Never had she encountered an animal species other than her own.

The pair of them fell asleep only to be awoken by a buzzing sound. The core was near. The deserted area across the muck was a sight for sore eyes. Dilapidated buildings and ruins of a megacity could be seen in the distance. This was similar to the illustrations Komal had seen in her village school. The *fish-wolf* started barking, signalling to turn away with increasing tension. Komal let him into the water, gesturing that she would come back for him. It was her mission alone at the end.

Komal felt her head swirl as her boat rocked towards the shore of the abandoned city. The old *Hindu* priests from her village hypothesised that the city kept shifting its location as the core of the earth was constantly moving. Nevertheless, she managed to step foot into it, wearing

long black boots carefully designed by Bhagwan. She removed a map from her bag, which would lead her to the herbs. The core was not far, as she could feel her body burning. Her time to complete her mission was limited.

She ran as fast as she could amidst buildings recaptured by nature where green moses grew. Surprisingly, an abundance of wildberries, wheatgrass and strange, new plants had sprung up around the once arid region in the course of the past few decades. Komal stopped running. She removed a plastic bag, and started collecting large samples of the myriad of herbs present all around her. Some resembled small pomegranate seeds while others looked like full grown vegetables. Suddenly, her eyes fell onto the cacti grown near an abandoned banking office.

She walked towards the once functioning banking office, where numerous accountants had toiled themselves away for hours, convincing inhabitants of mutual fund benefits amidst rising disasters. All this before the seasons changed and the suns exploded.

Suddenly, Komal heard a rumbling sound, and found a pair of human beings atop a strange scooter which was running by itself on wheels. Komal had read about this in her history lessons. She didn't know these still existed. And how come were they here, which was close to impossible? Were they also resistant to radiation? And how on earth would people actually live here?

The scooter came to a jolting halt next to Komal. A girl, probably her age, tried to touch Komal. She lurched away from her, in fear. Walking a few paces, she hid behind a building observing them from afar. She didn't want her life to end at the behest of other humans, so she thought it would be best to resist.

There was a garden across from her which led to a labyrinth of underground tunnels. She had learned about it in the map as one of the possible spots for cacti which would then produce the sea berries. In the hope of avoiding conflict and finding cacti elsewhere, she sped towards it. Unfortunately, she slipped in the mucky ground and ended up being dragged towards the debris. The sheer speed of the force was making her lose consciousness. She heard faint sounds of a whirling scooter. The scooter manoeuvred and picked her up just in time, averting her fall towards her demise. The last thing she remembered was a weird tingling sensation in her arm.

Epilogue

When tribes from ancient civilisation first encountered each other, there was fear. This fear almost cost Komal her life. Her saviours were the very source of her fear, just like the spot of destruction was the source of mankind's cure.

The two strangers had erected a tent which would block all radioactive isotopes, and the heat. Inside, it was cold with the help of a generator functioning from geothermal heat.

"I am Tuuli and I come from the northernmost part of the Great Islands," said Tuuli, speaking in the ancient language of *Estonian*, extending her arm to Komal.

It sounded gibberish to Komal. Only when Tuuli would draw onto an old book with the help of her father, would Komal start to comprehend her thoughts. Language was a fluid yet inconsistent notion. But soon she understood that the pair of them, father and daughter, had travelled South to collect the same herbs.

She was almost surprised to know that they already utilised the herbs in the region of the Wastelands. They even made radioactive blockers, medicines, food products and liquid soap from the herbs. There was also a way to farm them by replicating the samples elsewhere on earth.

So far, the pair of them, father Andrus and daughter Tuuli, had managed to build a scooter and a boat, but never decided to take the week-long voyage to the Midlands from the Wastelands. This was as far as they had managed to travel. However, it was Andrus's dream to travel as far as he could, even to Tengrins, and down South into other unknown continents. They believed the world was more than Tengrins, Midlands, Wasteland and the Great Islands.

In the next few days, Tuuli's father Andrus injected Komal with some radioactive blockers, made from crushing the roots of the *cacti berries*. Instantly, her hair transformed from spikes to curls, like her mother, while her red eyes turned into regular brown. She regained the haemoglobin in her blood, and her nails turned into a normal shape, simply over the next two days. She observed herself in a side-mirror which she had packed into her sledbag. She realised

she had transformed into a new person. She looked like a warrior woman from older tribes, who had her own sense of identity. The scars and trauma from the burning suns evolved and instilled hybridity onto her skin. She was rejuvenated with hope.

High on confidence, Komal had to make a decision. Should she go back East towards her village into the Midlands to share the recipes with her people? Or to travel across the globe to discover new secrets? The second prospect sounded more interesting to her.

Meanwhile, Andrus pinned his hope on the East—to visit the *Tengrin* mountains, to build himself an armoury, adopt Shamanism and try cave delicacies. A split-decision was necessary. Over the next two weeks, Tuuli and Andrus constructed a new scooter from scratch, using elements scattered across ten sledbags. Once they had finished, they divided their luggage amidst themselves and parted ways.

Komal saw Tuuli shedding a few tears. Perhaps it would be a few years or so, when she would see her father again. Tuuli hugged Andrus tightly. Komal handed all the drawn maps to Andrus which would guide him towards *Bhagwan*, and her village. Meanwhile, Tuuli had marked maps, taken coordinates of all of their family and friends, as well as planned each leg of their journey back towards the Northern Tribes of the Great Islands.

Rejuvenated and born a new woman, Komal decided to go further North along with Tuuli. The secrets of humanity, and the act of plotting a new map were awaiting the few survivors.

End of Part One

Part Two: Fragmented and Divided Pieces

Geolocation: Tallinn, Estonia

Tuuli

Tuuli had never seen the *fish-wolf* or even heard about their existence. A snow cycle earlier, Komal had insisted they rescue it from near the shores before embarking on their journey. They named him *Igor*. He was terribly sick, and had to be given many radioactive blockers. But once they set out towards the Northern Islands, his health improved rapidly. He would effectively catch different species of fish for them. When he was around, food was in abundance. Reluctant at first, Tuuli was glad that *Igor* was now a part of their group.

The old men around them were sipping on *Strellasbier* made from the hops, rice and barley grown in the greenhouse of the region. Tuuli observed that Komal donated some *cacti seaberries* in exchange for *paella*, an exquisite cuisine known from centuries ago made from rice.

"Are you drawing diagrams of the greenhouse?" Tuuli asked her.

Komal nodded while speaking in broken Estonian, a language she picked up from Tuuli, "Yes, one day I will bring this back to my people. In my village, our scientist Bhagwan made a minigreenhouse but it was hardly as effective as this one. The Midlands will also progress like the Great Islands someday."

Tuuli hugged and reassured her, "Ofcourse, they will."

Komal retracted, "I feel guilty. For leaving my people."

Tuuli sympathised and said, "No, it was necessary for you to leave, and learn secrets of the other continents. Only then can you go back and share it with them." Komal nodded.

After leaving from the warmer shores of *Spaña islands*, they soon realised that their boat needed quick repairs. They were running out of resources. While they did receive generous food and shelter from Andrus's friends, none of them had repair tools.

They had to quickly and swiftly make their way up North to Tuuli's small island. Their travel across the region of the Great Islands, with its great diversity, abundance of culture and cuisine specialities had to wait. Some legends said it once used to be all land, in a continent called *Europa*. Tuuli laughed at that thought, since the ways of the sea were the only ones known to her. Land was harsh, desolate and required effort.

A few days later, they reached the shores of her village called *Tallinna*. "There are only five Estonians left in the world. My grandmother used to say that there were millions before the sea came to our land. I don't know if I believe her. She was always exaggerating."

Tallinna was one of the very few Estonian islands left in the world, the others being fragments of Saaremaa which were completely uninhabitable. Herein, the cold was dreary compared to Spaña. Komal had never seen the force of wind so quick that it could drag one to the shore if one was not careful. Igor kept getting back into the sea, although he seemed to enjoy it. The air was very fresh, being so far from the nucleus and the Wastelands. Although it was even harder to grow anything naturally. Technology was the tool for this island, fuelled by long expeditions taken by Tuuli and Andrus. The travelling duo has steered the fortune of the place.

"Most of us live indoors except for quarter of the snow-cycle where we breathe fresh" remarked Tuuli, as she gave a walking tour of the remnants of her home island.

A total of five people, including Tuuli and her father, inhabited the greenhouses and homes of Tallinna, which carefully maintained an optimum twenty and four celsius throughout the year. Marlene, a thirty year old woman, was their engineer and construction specialist whereas Eduk, her 7-year old son helped old grandma Eha, in farming. When Eduk was young, Marlene was widowed since her husband drowned in the sea. Grandma Eha lost her family decades ago. The five members formed a close-knit community and sought to develop Tallinna to its optimum potential. Tuuli took Komal by her hand, towards their village's latest creation.

"A flying machine", she remarked.

Komal gasped, awestruck at the magnitude of its sheer size that could fit up to 6 people.

"We've only been able to fly it across a few islands. But you know why father has gone to the Tengrins? Only to find more parts for this, so we can travel the world with it" remarked Tuuli, with a sense of pride.

Komal jumped with excitement, bewildered and amazed by the thought. Imagine if she came back to her village with a flying machine, wouldn't Anita be proud? It had been almost a year and a half since she started the expedition. She had turned sixteen today, and had totally forgotten her own birthday. The duo celebrated with leftover baked goods from Spaña.

Marlene

While the children were optimistic and quibbling away about progress and humanity's future, Marlene was bothered about other aspects. Tallinnas shared a good reputation amongst the other Estonian islands. It even formed a trade link with Spaña, that helped bring progress to both regions. But Dookins and Poolsens, the leftover fragments had intentions of declaring a war on them, in order to pillage their resources and technology. If they would lay hands on their flying machine, it would be used destructively in order to capture all of the Great Islands. The leaders of Dookins and Poolsens were fragile, old men with fragile egos. They had not learned from the past but were likely to repeat the destructive path their ancestors had chosen. To avert a possible crisis, Marlene had constructed barriers along the islands and was bolstering up defence plans in case of possible attacks. She had even constructed radioactive hand-bombs to kill and maim any invaders immediately. However, she wished she never had to use these gruesome measures.

The coming of Komal brought her a slight sense of hope, amidst the most forlorn and desolate ideas that often brimmed her mind. Maybe the little one could convince the Great Islands to not fight amongst themselves like the Midlands once did. It had only brought misery to the place and probably also to Komal's ancestors.

Once Komal and Tuuli were separated, she approached her cautiously and carefully. Komal jovially spoke about her village, her mother, Anita and engineer, Bhagwan who was akin to

God for her people. Smiling, she asked her about history lessons in her classes. Much to Marlene's surprise, Komal didn't even know about the war in Midlands. Their lessons only focused on the season changes and the sun explosions. Marlene thought pensively.

Over the next few weeks, Marlene gave her a comprehensive understanding of the history of Midlands, the Great Islands, Tengrins and the Wasteland. After the suns exploded and seasons changed, some survived. Yet, the establishment of colonies took time in all that had prevailed. Marlene taught Komal about the evil generals, the revered messiahs, the bloodthirsty hound soldiers and the desolate common folk amidst the vast stretches of mountains, land and islands. Greed was a repetitive pattern in all of these stories.

Marlene was secretly preparing Komal for a mission. She would become an ambassador of peace in the coming years. Her lessons in the most spoken languages of the Great Islands continued. She took a keen interest in this young girl from Midlands. After all, she did not want the knowledge of her community of five only to be decimated by a thousand from Dookins and Poolsens.

"What if there is greater life beyond the Great Islands? Have you sailed further to the West or the South?", Komal asked Marlene. She shivered at the thought, clutching at her son, Eduk.

"Many-a-great sailors perished trying to go west and south. The waters are too choppy and dangerous. My husband drowned in his attempt to go west. The winds caught up with my daughter-in-law as she went south.", she said, with a regretful look.

Komal said, "But what if we were to use the flying machine?"

Marlene had a feeling Komal was right, although she did not want her to leave anytime soon. Somehow, she convinced her to stay and meet the generals of Dookins and Poolsens. Once the situation would be pacified, travelling west or south could become sustainable.

Komal

A few snow cycles later by her 18th birthday, Komal was well versed in all the languages of the Great Islands. She was also well read in history, geography and political sciences. Marlene was her mentor and tutor, and ensured she grasped everything as quickly as possible. Furthermore, grandma Eha had taught her valuable farming skills. She could not only grow her own food but also create medicinal products from locally sourced herbs. She once prepared cauliflower curry, one of her own recipes, using leftover spices and herbs from her midland village. On the weekends, she would take trips with the Flying Machine along with Tuuli. The two of them were often inseparable, forming a lifelong bond. These two years were one of the happiest in Komal's life.

Out of the blue and much sooner than Marlene had anticipated, Dookins and Poolsens invaded the Estonian islands. Tallinnas was further away but news of the invasions reached fast amidst them. The greenhouse now housed around fifty refugees. Owing to effective communication systems amidst the islands, no one had died so far. Theor defence system was almost impenetrable, although if their boats would be capsized, their connection to the outside world would be hindered.

"It is time," Marlene told Komal one morning, "You must go South! West has rougher seas, and would take longer to cross perhaps! South is out hope. Take Tuuli with you! We have enough among us and our greenhouse can sustain everyone of us for over a year. Get help for us to stop the war!"

Komal replied to her, "Are you sure there are people in the South?" Marlene nodded, "There are. I'm certain of it, and perhaps more technologically or advanced. They can help stop this war." Komal thought pensively, "I feel technology leads to more war. I wish the world could use it the right way." Marlene hugged Komal.

Tuuli and Marlene spent over an hour crying and laughing, talking, discussing logistics and casually discussing the future. Meanwhile, Komal prepared the engine of the flying machine for a long expedition. Andrus had come back last year with loads of new parts, enough for them to circle around the globe. However, much to Marlene and Tuuli's dismay, he had gone back

with the Tengrins to meditate and become a shaman. Komal missed his technical guidance at times but she was indeed in charge of the flying machine—a vehicle for their future.

Epilogue

Once both of them were ready, Komal geared up the engine as they lifted into the air. Those in the greenhouses waved goodbye to them, as its shutters immediately closed with the flying machine's exit. The generals of Poolsens and Dookins retreated a few steps, anticipating an attack. Much to their relief, the planes went south.

"Hah—another suicide mission", remarked the general commanding the Dookins army. However, the general of Poolsens remarked, "Their greenhouse cannot be penetrated. Maybe if we invested in science and not war, we could go further. I think they will reach to the South for help." The general of Dookins sniggered away, taking a sip of a local flowery sap, which intoxicated him. "Let's call a truce", said the Poolsens general. The general of Dookins replied, "What nonsense! Never." Little did they know this banter would cause their entire army to give up their arms and overthrow the drunk general, little by little.

The commandeering image of two young women in a flying machine, exiting a modern greenhouse generated fear and awe in an army of thousands. Finally, seeds of peace were strewn across the lands of the Great Islands.

Meanwhile, Komal and Tuuli would find new places across the globe starting from the Great Ibiz, the Dragon's Nectar, the Giant Tree in the South until they would fly westwards to chance upon the largest mass of land: *Cherookes*, inhabited by very ancient tribes. These two geographers would change the course of history. Little did they know about that, yet.

The End

Summary and Reflection of the Exercises

Written by Rahul Sharma

Since the final entries of my research were focused on creative writing, my research exercises were aimed at imagining Estonian society, hundred years from now. They focused on creative brainstorming sessions, character sketches, photographs of villages around Tallinn and interactions with locals. Estonia is a very modern and progressive society, relying heavily on e-communications while promoting organic produce and preserving nature. It is also a sparsely populated country. I wanted to instil these aspects into my final entries while imagining the scenario when the sea levels would drastically rise and people would be forced to function as small, cohesive units on fragmented islands. I also understood that my final creative entries can also form the premise of a larger work if my characters were sketched out effectively.

Meanwhile, I contacted my grandparents and used archives to research more about the geographic region around Kanpur, which is polluting the Ganges and rife with tanneries. Imagining the dreadful scenario in case of climate change and nuclear disasters, a snowy winter although uncommon for the region, would not be a distant dream. The region is abundant with Hindu temples, priests and society functions at a collective level. Adding that culture background to my final submissions was also integral to preserve the current originality of the cities.

Overall, the exercises helped me in character development, storytelling and also in revisiting cultural contexts of the two chosen cities for my final entries.