

STARS

Project

TOOL KIT

GOOD PRACTICES

TOOLS & EXPERIENCES

UNIFYING NON FORMAL EDUCATION WITH

ASTROTOURISM



Co-funded by the
Erasmus+ Programme
of the European Union

Part 1

**STORIES FROM THE
SOLOMON ISLANDS
OCEANIA**

**STORIES FROM BALI,
INDONESIA
ASIA**

**STORIES FROM THE
CANARY ISLANDS,
SPAIN
EUROPE**

Part 11

STARS TRAINING COURSE

STARS JOB SHADOWING

STARS MULTIPLIER COURSES

STARS ROLE MODELS

STARS

a brief project (hi)story



Although the approval letter (yuhuu!) of "STARS: empowering & creating new job opportunities" reached us in 2020, the worldwide situation permitted starting the project in January 2022 with an online kick off meeting and continue working virtually.



In November 2023 arrived the long-awaited moment to meet in person: an unforgettable STARS Training Course and Job Shadowing took place in Bali, Indonesia, continued by several Multiplier Courses.



We really hope that you will enjoy this info kit that tells the STARS "project family's" experience and reflects the goal of the project: linking star-related legends with non-formal education and astro tourism.



For more details check out
stars.fifede.org

STAR SEARCH.. NOT IN THE SKY!

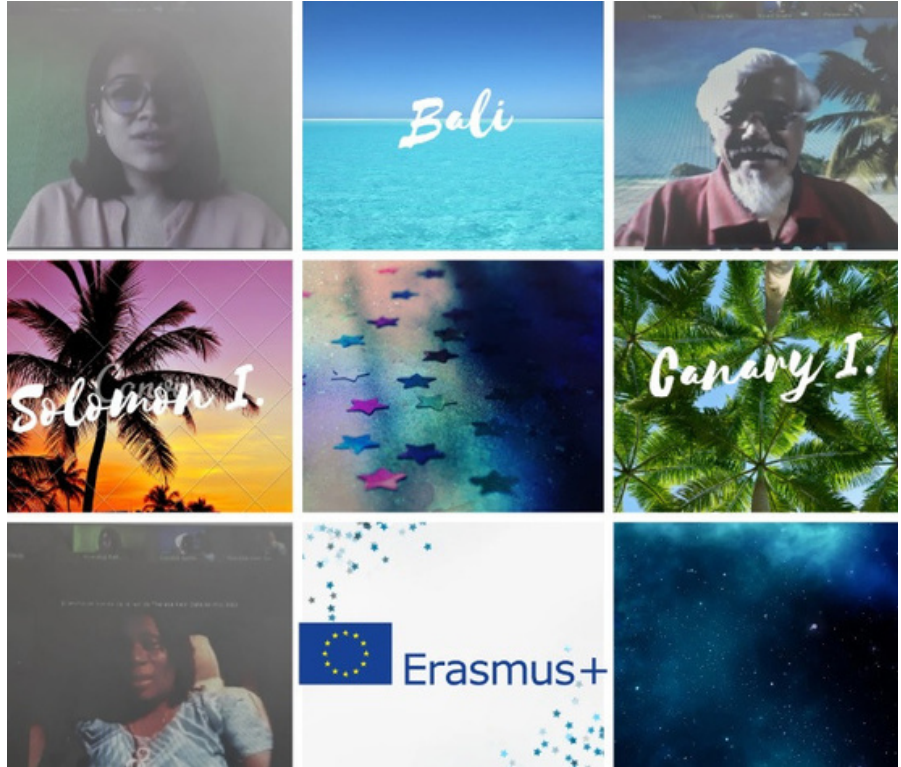
Youth in 3 continents go "legend hunting"

LOOKING

IN THE PAST

When FIFEDE (STARS partner from Tenerife, Canary Islands, Spain) previously collaborated with the Solomon Islands National Youth Congress (STARS partner based in Guadalcanal, Solomon Islands) we were amazed about the cultural richness of our islands and had a sad conversation how inevitably it's fading away... Also IPB International felt the same about their island: Bali, Indonesia.

Wait, but... what if there was a project to collect at least some legends before they are gone? And, evenmore, make them more visible to the world and create some sustainable tourism activities involving the cultural heritage? That's how STARS project was born! It's aim is unifying non formal education methodology with astrotourism as an innovative & attractive approach in



international youth work. STARS shows how the past can empower us and provide an amazing base for creating new products of astrotourism which is a part of sustainable tourism - the future of tourism.

OWNERSHIP

The elders honour the legends so much that in the Solomon Islands they were concerned if they will be treated properly. Therefore, we would like to ask for your respect of these stories that have passed from generation to generation and state that the ownership of them pertains to the tellers.

LET'S START THE SKY LEGEND HUNT!

To illustrate the context of the youngsters who went stars-related legend hunting: all of us are islanders. So, our ancestors used the stars for navigating in the ocean and they should be present also in a lot of legends... However the task was more challenging that we thought! We extended the search to legends, myths and beliefs related to sky. It took us quite a time finding and interviewing elderly islanders and it was so interesting!

RESULTS

We hope you will enjoy as much as us the selection of our favourite sky-related stories that are gathered in the PART I of the STARS TOOL KIT!





THREE SISTER STARS

VEHTUSI NGAU'NGAU, VEHTUSI NGORA, AND VEHTUSI DANI

Once upon a time there were three sister stars, called Vehtusi Ngau'ngau (evening star), Vehutsi Ngora (midnight star), and Vehutsi Dani (morning star).

One night their father, Vehtusi Rondo, called the three daughters and told them to do their usual tasks for the night: to the eldest sister: "Shine at early evening!", to the middle sister "Shine at midnight!", and to the youngest sister: "Shine in the early morning, until dawn!".

So, at the beginning of the night Vehtusi Ngau'ngau, the eldest, was shining very brightly, and she was having a lovely evening. However, at a certain point she was disturbed by some mothers in the village shouting, calling and giving signals to their children for an evening bath. She was furious, and she tried to find her second sister, Vehtusi Ngora. After a few hours, she finally found her, and she complained with her about the frustrations suffered over the evening routine. Vehtusi Ngora said: "Do not worry, from now I

will go on shining brightly".

When Vehtusi Ngora started to shine, the village became very quiet and Vehtusi Ngau'ngau was very pleased with her sister. But shortly after, also Vehtusi Ngora was disturbed by a baby crying. She was very annoyed, and she asked her younger sister, Vehutsi Dani, to come up in the sky and go on shining. And Vehtusi Dani started to shine.

When the child's mother saw Vehtusi Dani, she began to sing a lullaby to the baby: "Chembi nana tinana, nau ago dalena, vangavanga nirohe o...o". The baby finally stopped crying, and everything was quiet again. At this point the three sisters were happy again, and they disappeared at dawn break.

Today, when a child cries in that village, the mother goes out and looks for the three sister stars. Whenever the mother sees the sister stars, she sings the same lullaby, to make the baby stop crying. This is a tradition practiced and transmitted from generation to generation.

LEATHERBACK TURTLE

IN THE EAST GUADALCANAL

there is a famous legend about a mother leatherback turtle named Raro.

When she was 30 years old, Raro was about to lay her eggs, and she had no other wish but going back where her own mother laid her eggs.

In order to do so, Raro had to seek permission from the god of the lightning, called Pilatia, and ask for guidance to her birth place.

Raro waited patiently for the sky to be clear, and when she saw the stars shining all across the sky, she crawled down to the beach facing the ocean, she looked up straight at the clear, peaceful sky and she cried out in pain, saying: "Pilatia, do you remind me? When my mother wanted to lay her eggs here, 30 years ago, you allowed her. Now I wish to lay my eggs in the same place!".

The god of the lightning, Pilatia, granted her wish, and suddenly a lightning with a loud thunder flashed across the clear sky, in absence of clouds or rain, indicating that permission was granted.

Nowadays, in the East Guadalcanal, when the sky is very clear and there is a lightning strike with a thunder, local indigenous people believe that another leatherback turtle is asking Pilatia permission to lay more eggs.

This place is a forbidden zone during leatherback turtle labor.

FISHING SIGNS

FISHERMEN OF LOCAL VILLAGES BELIEVE

that the moonlight can give them luck, and help them to get good catches when they go fishing. Before going into the sea, they look at the Moon searching for three signs.

- If you see the 'C' sign, called "Bilana", it means that you will probably get a bad catch or, even worse, you will get nothing.
- If you see the 'D' sign, the "Bilana" vanishes, and the Moon will help you to capture the full body of the fishes: you will get a good catch!
- If you see the 'O' sign, which is the sign representing the fish, it means that the fishes are in reproductive/mating season, and it is a bad time to go out for fishing. You will not catch a good catch.

These three signs are still used today by the village men as a guide for fishing.

HAUHAR'I LEGEND

ORIGINALLY COMES FROM THE MAKIRA/ULAWA PROVINCE

but it then spread also in Eastern region of Are'Are (Malaita province).

It tells the story about how the god of the sun, Ratoma'I, the god of the moon, Hura, and the god of the stars, Mataranitani, protected and guided the young daughter of a village chief from the Arosi district in Makira to the eastern Are'Are region in Malaita.

One day, the elder daughter of the chief, Ruasau, was invoking the gods of the Sun and Moon. All of a sudden, the god of the Stars intervened and interacted with the gods of the Sun and the Moon. All together, the three gods decided that the younger sister, Hauhari'I, had to leave the island. The younger sister left the island, and headed to the most closeby island, called Malaita.

While paddling her canoe, she could still see her elder sister and her island Makira behind her, so she continued paddling until she reached a point in the southern part of Malaita, now known as Afio station.

She looked back, and she could still see her island. At that point, she began to feel emotional and very sad, until she decided to jump into the sea and she turned into a huge stone.

In this new form, she started to move and she "splitted" the island, just to hide herself from seeing her native place.

So, the legend says that the younger sister broke through the island until she arrived at East Are'Are, where she could no longer see her native island, and she remained there till today.

In the Eastern region of Are'Are, there is a huge white stone that lies between the big island of Malaita and small Malaita (southern region), which is believed to be the younger sister, Hauhari'I. When the weather is crystal clear and the sea is calm and very peaceful, pools of different kinds of fish, dolphins and turtles swim around the white huge stone. When seagulls fly above it, it indicates that it is a forbidden fishing zone.

During traditional feasts and parties, the fishermen usually go to "Hauhari'I" to make sacrifices to the gods, and they always come back with tons of reef fish. And this only works when there is a full Moon, and when the Southern Cross straightly faces the Southern part of the island.

In 1942, when World War II reached Solomon Islands shores, a USA air fighter shot at the stone, thinking that it was a Japanese warship. Astonishingly, the stone was not hit by the bullets, which were only splashing water all over it.

Today the local indigenous people know when it is the right time to go fishing at that spot and when it is not. It is believed that if you don't ask permission from the gods, you will be drifted back to Makira province, the birthplace of Hauhari'I, the younger sister.

The scene is now a worship place of sharks and turtles.

Worshippers only come to the place during moonlight, and during dawn.

The huge stone can still be seen today, and its story/legend that was foretold from generations to generations.

LET YOUR IMAGINATION FLY WITH... *stories from the Solomon & Canary I.*

LAOVI LAKE

ONE DAY TWO SISTERS, TEOSAMBA AND NIKUNIKU

found a baby eel fish in a stream called Sule, and they wanted to find a safe place for the eel fish to live in. So, they built a breeding ground for the eel fish.

They went there every day, feeding the eel fish with a plant called "kuika", so the eel fish started to grow bigger.

One afternoon a man called Gugutu was hunting, and he saw the eel fish. Thinking that the eel fish was a wild one, and not a tame one, he hacked it to death.

The two sisters realized that the eel fish was in a state of emergency, so they rushed to the stream, but when they arrived the eel fish was already dead. So they carried it to a dip that seemed suitable to make a fire, and they started cooking the eel fish.

Right after they finished cooking it, a thunderstorm broke out and the place started to fill with rainy water. The girls struggled to get out of the dip, but they were slipping because of the eel fish grease, so they got stuck in the pool and they died, being submerged together with the dead eel fish.

The place became a lake, and it was now called Laovi Lake. When it is high tide, you can still notice some charcoal on the bank of the lake.

SUANI BARABARA

ONE DAY A LITTLE BOY

named Suani Barabara was called by his grandfather, who asked him to climb a betel nut tree. This seemed to the boy an exciting adventure, and moreover Suani Barabara always obeyed his grandfather, so he started to climb the betel nut. At that moment, the betel-nut suddenly started to grow taller and taller, until it reached the clouds.

The boy stepped on the clouds, where he saw some people eating food that was not cooked. He went close to them, and he told them that it would be better to eat cooked food. He gladly showed them how to cook and bake the food, but then he expressed the will to go back down, because he was missing his family. The people of the clouds were very grateful, and they decided to help the boy.

They made a rope of lawyer-cane (a type of climbing palm), tied to a wooden drum at the two ends, with the boy seated in the middle. They lowered down the boy until he touched the ground. At that point, the people of the clouds dropped the lawyer-cane rope, so that the boy could go home safe and sound.

Today, in the place where Suoni Barabara lived, you can still see a lawyer-cane rope without a bottom plant in the ground, and the top of the lawyer-cane rope is hard to find. In the same place, in East Guadalcanal, there is a tribe of people who call themselves "Suani Barabara", after the name of the little boy.

THE WITCHES DANCE

THE SKY WAS THE ABODE OF GODS

in the ancient inhabitants of Tenerife (Canary Islands) - Guanches - culture. When the sky was dry, the storms did not come and there was no grass for the cattle due to the lack of water, the Guanches gathered the goats in specific places, usually located at the top of mountains, where they could clearly see the sky and be closer to the Gods. These places were called "baladero" of the goats. There the shepherds separated the young cubs from the herb and forced their mothers to stand on the other side, bleating in pain for this separation. The Guanches believed that the Gods would feel pity for the animals, when hearing the bleating of the goats, and would provide them with the needed rains.

It is also believed that in these places the Guanches gathered for other religious rituals, dances and celebrations.

After the arrival of the Europeans and the conquest of Tenerife island, the Catholic religion was established. These and other similar rites were considered pagan, and all the people performing such rites were accused of witchcraft. Over time, the name of these places changed, and they came to be known as "bailadero", which means "the place where witches dance".

Today, many places in the mountains of Tenerife still maintain this name, where the Earth connects with the sky.

THE DRAGON

ASTRONOMY ALWAYS PLAYED AN ESSENTIAL ROLE FOR ORIENTATION

Since ancient times, stars and constellations have been used by travelers as guidance in their journeys, and now we can do the same. Today, we can find the North by using Polaris (the North Star), in the constellation of Ursa Minor. However, it was not always this way. 5000 years ago, due to the movement of the terrestrial rotational axis, the North was indicated by a different star, Thuban. Thuban is a star in the tail of the Dragon, a constellation which represents a legendary animal particularly dear to the Canarian inhabitants.

As many other constellations which tell us stories about the past, the constellation of the Dragon is linked with an ancient legend, the legend of Heracles.

Greek mythology tells us about a beautiful garden, the Garden of the Hesperides, an orchard owned by the goddess Hera, which some mythologists place in the Fortunate Islands, the name by which the Canaries have been known since ancient times. In this magical orchard there was an apple tree whose golden fruits gave immortality to those who ate them and which were guarded by a hundred-headed dragon named Ladon, that never slept.

In its 11-th task, Heracles had to travel to the ends of the known world, which at that time was considered the place today corresponding to the Strait of Gibraltar, to bring King Eurystheus the golden apples of the Hesperides, who lived on the western edge of the world. Heracles did not know where the

garden was, and he wandered for a while before finally reaching the garden after a long series of adventures.

When he finally reached the garden, Heracles asked Atlas for help. The titan Atlas had a heavy penance, since he had to carry the celestial vault on his shoulders day and night, so that the sky would not fall onto the heads of men. When Heracles offered to take his place for a while, so that he could go to the garden and get the apples, Atlas did not hesitate for a moment. All he wanted was to get some rest, and it looked like he was going to get it. He only put one condition: before, Heracles had to kill Ladon, the dragon with the hundred heads.

Of course Heracles did it, and with a single arrow pierced the heart of the dreaded dragon, simultaneously dropping the hundred heads to the ground. The blood of the dragon started to run down the mountains of the islands, and it is believed that from the blood of this dragon were born the Dragon trees that can now be seen in the Canary Islands.

The Guanches considered the Dragon tree as a sacred plant,

since when cutting its bark, a red and viscous sap similar to blood sprouts. This sap is indeed called "dragon's blood".

According to tradition, dragon's blood was used by the Guanches as medicine, to heal cuts or strengthen the gums, and it was part of the ointments used by the Guanches in the mummification process.

Nowadays, dragon's blood is still used in cosmetic products for its healing properties.

CHAXIRAXI

ONE OF THE GREATEST ENIGMAS OF THE GUANCHES

is the ownership and adoration of a Christian image long before the Conquest of the islands by the Spanish christian conquerors was carried out. Among the pantheon of the Guanches there is a goddess called Chaxiraxi, whose name has been translated as '*the one that carries the firmament*'. She is considered the Mother of the Sun, the goddess of dawn and dusk, and also the promoter of fertility.



LET YOUR IMAGINATION FLY WITH...

Stories from the Canary Islands

Chaxiraxi was probably related to the goddess Juno of the Mediterranean-North African Mythology, and with the cult to the star Canopus, the second brightest star in the sky. According to the lunar calendar of the Guanches, the appearance of Canopus in the night sky marked the beginning of the year, and also the beginning of the Beñesmen, a harvest festival during which the Guanches carried out material affairs, and celebrated cultural and spiritual traditions. It was considered as the "Guanche New Year", and it coincided with the gathering of the harvest.

According to Chaxiraxi's legend, two Guanche shepherds were pasturing their herds in the Chimisay area (today the Socorro beach, in Güimar). Once they reached the mouth of a ravine, the shepherds noticed

that the cattle were not moving forward. One of the shepherds moved on into the ravine, and saw a wooden image of a woman on the top of a rock about a meter high. She was carrying a candle in her left hand, and a child on her right arm. The child was in turn carrying a little golden bird in his hands.

The shepherds decided to go to the Mencey (king or ruler) of Güimar to tell him what happened. The Mencey, accompanied by the principals of his kingdom and a consistent number of other people, went to the place indicated by the shepherds. When he saw the image of the woman, he remained astonished, and he thought that she was a superior being, a goddess. The Guanches picked up the rock, and, carrying it on their shoulders, they took it to the Mencey's home in Güimar,

placing it on some goat skins in a cave called Chinguaro.

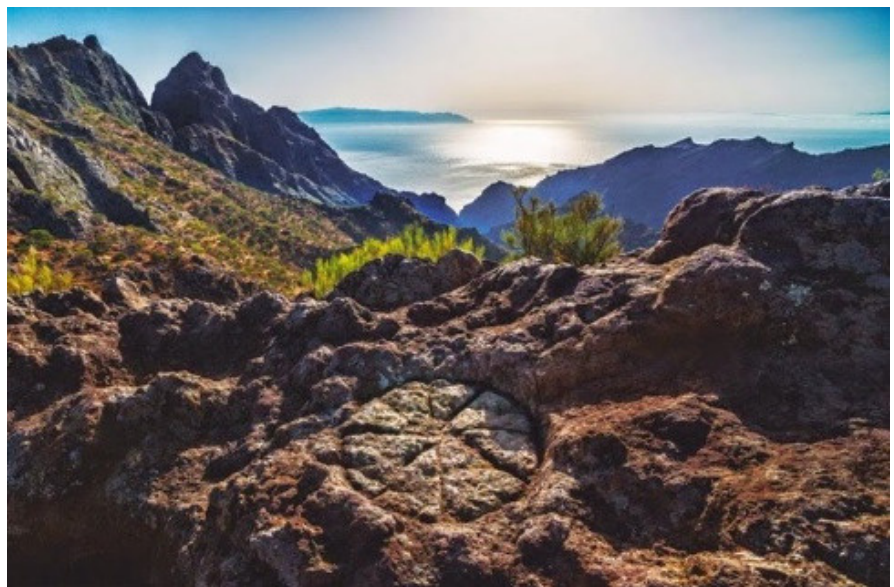
Later on, the legendary arrival of a statue of the Virgin to the shores of Güimar in 1401 served the Christians as a catalyst to unite both entities. In fact, Chaxiraxi was the first name given to the Virgin of Candelaria, who would end up becoming the Patron not only of Tenerife, but of the whole Canary Islands. The legend says that the original image was lost after a strong storm that shook the island. All the actual sculptures are replicas of the original image lost in the storm.

In any case, Chaxiraxi cult spread throughout the island, undoubtedly due to the identification of the image with a supreme being already existing in the Guanche religious pantheon.

MAGEC AND ACHUGUAYO

THERE IS AN ENGRAVING DIG IN THE STONE

In the mountain called Pico Yeje at Masca (Tenerife, Canary Islands, Spain). It is now known as "La quesera de Masca" ("The cheese production of Masca"), due to its circular shape, which resembles the molds used to produce cheese. This is an ancient Guanche symbol, constituted by joining various cazoletas and channels, and it is believed to represent the Sun, with nine engraved rays that join in the center. The figure is associated with astronomical symbology, and in particular to Magec (the Sun) and Achuguayo (the Moon), two of the Guanches gods. This symbol was probably used as a compass to predict the rise and the set of the Sun at the summer



and winter solstices, respectively.

The function of this place in pre-Hispanic times and its proximity to a burial cave suggest that libation rituals, such as the pouring of milk and blood into the cazoletas, were related to the cult of the dead. Possibly the Guanches believed in the intercession of the spirits of the

ancestors before the divinities. The site also seems to be associated with the volcano Teide, since from the place where the solar representation is located it is possible to observe the cusp of the volcano, towards which the symbol is oriented. This place can therefore be considered as a proper sanctuary in the mountains.



GUAYOTA

ONE OF THE MOST FAMOUS GUANCHES LEGENDS

is about the most shining and closeby star of our sky... the Sun! The Sun was known as Magec in Tenerife, and the Guanches were particularly devoted to it. Their vows were done in the name of Magec, who would have burned those who did not follow the promise. Similarly to North African berber tribes, it was seen as a feminine character, since the name could be interpreted as “ma-ayea” (the mother of glare) or “m-ayea” (the woman that has the glare).

A legend says that a long time ago Magec shone calmly high in the sky, giving light, warmth and tranquility to the island of Tenerife and its inhabitants, when, suddenly, the animals were restless, the dogs howled, the birds flew in flocks from one side to the other as if trying to find shelter, and even the sea was rough... It was Guayota, the Evil One, who had come out of Teide’s entrails!

The frightened Guanches made offerings of food to Guayota to calm him, taking them deep into

the caves, but Guayota all of a sudden raised up into the sky and captured Magec, taking him prisoner and hiding him inside Teide. At that point, the day turned into night, and gloom and darkness took over the island.

Initially, the Canarian aborigines lit bonfires all over the island, to make Guayota think that he was still in hell, in the attempt of making him leave the island soon. But in the end the Guanches, afraid that the darkness of the day would become eternal, went to Achamán, the Great, the Sustainer of the Heavens and the Earth, asking him for help. Achamán, willing to help the Guanches, went to Teide in search of Guayota. A hard fight broke out between the two: the earth trembled and broke, and smoke, lava, sulfur and rocks began to come out of Teide, descending its slopes and lighting up the sky. Guayota was trying to defeat Achamán!

Finally, Achamán managed to defeat Guayota, and freed Magec, who once again illuminated the sky and warmed the Earth. The days

were again filled with light, the air, the sea and the animals were calm, and the Guanches were happy for the victory of Achamán.

Guayota, as punishment for his wickedness, was locked up inside Teide by Achamán, who plugged the crater to prevent him from escaping. The crater mouth was plugged with what is now known as the “Pylon of Sugar”, the whitish crown located at the top of Teide’s peak. Since then, Guayota has remained there, inside Teide, and we can still feel him breathing near the crater...

This Guanches legend perfectly represents the consequences of a great volcanic eruption in which volcanic ashes cover the Sun (generating darkness), and earthquakes and explosions occur. As the eruption decreases in intensity and finally ends, the ash emissions decrease, the sunlight returns, the calm reigns again, and it is possible to see new volcanic cones and structures created during the eruption.

Surely, this legend describes the last eruption of Teide, which occurred about 1100-1200 years ago, from the cosmological perspective of a population that experienced it and transmitted it orally from generation to generation.

LET YOUR IMAGINATION FLY WITH...

Stories from the Canary Islands

GUAÑAMEÑE

A GUAÑAMEÑE WAS A GREAT SHAMAN OR PRIEST

on the island of Tenerife. They were highly respected and revered, and they had a great knowledge of the oral traditions. The Guanches used to consult them about love, illness, birth, marriage, future, and wealth. Guañameñes were also interpreting natural phenomena such as rain and wind, and celestial phenomena related to the Moon and the Sun.

Given their wisdom, it was not surprising that even the island's rulers, the Menceyes, used to visit their caves to ask them questions about the future. One of these Guañameñes was particularly famous, because most of his predictions were correct, so one day Mencey Bencomo decided to go to his cave to unveil his future. The two men walk together to a sacred mountain, where the Guañameñe poured milk and blood in some holes in the stones. According to how the milk flowed, the Guañameñe predicted a dark future. He prophesied: "White birds with great wings will arrive from the sea, strange footprints will cover the sands of the beaches, and the loose earth of the mountains will curdle. Everything will be ready and prepared so that the cruel sound of battle can be heard. The combat will be long, and thousands of Guanches will die in the charge. At its end, the island will only be a spoil of the dead. It will be your defeat." Bencomo refused to accept the prophecy, and he ordered to kill the soothsayer. However, as predicted by the Guañameñe, after a short time the first Spanish ships would have landed and blood would have begun to

flow during the conquest of the island.

The holes of the legend are called "cazoletas", which means "cups". This term refers to the holes dug in the volcanic tuff or on basalt, of different sizes and shapes (round, ovoid and square). Many of these holes are associated with channels, also of different sizes and thicknesses, determining an apparently chaotic framework.

The archaeologist said that they were used by the Guanches to perform offerings, predictions and other rites, at specific spots around the island of Tenerife. According to some myths, as the previous one, the Guanches poured goat milk into the holes to make offerings, and depending on the way the milk flowed they could predict the future, or invoke the needed rain.

One of this "magical" spots is located in the now uninhabited hamlet of Las Palmas de Anaga, in Tenerife, at the squirts of a solid magmatic mountain called Roque del Aderno.

Roque del Aderno had also an astronomical importance for the Guanches. In fact, during the summer solstice the Sun emerges right on the top of this mountain, and it is believed that the aborigines performed some rites to invoke the Sun to come back and complete the circle of the year. In this place the Guanches connect the land and the sky, because at the moment when the summer sun stops, (solstice means "the sun stands still", referring to the fact that at the solstices the position of the Sun seems to stand still), the Sun rises again from the top of the Roque del Aderno.

FOUR RISING STARS

SIRIO, ORION, FOMALHAUT AND CAPELLA

were connected with the four seasons in the Canary Island aborigines' culture. They were able to recognize with precision solstices and equinoxes, being those the base of their cosmic and Earth order. For the aborigines solstices and equinoxes were not only one day, as nowadays in our calendar. It is complicated to calculate the exact day of the solstice, as the sun is practically in the same position during 8-10 days. The problem was solved when there was a star or a constellation that helped to identify the day with precision. When those periods of the year arrived, the guanches organized parties and weddings for 9 days.

FAMOUS BELIEFS

RELATED TO THE WEATHER

common to all ages. Among the most famous ones: If during the day you see the neighbor islands very clearly (even distinguishing the houses), then tomorrow it will rain! If El Teide volcano has a "cup" of clouds, soon it will rain!

THE BIGGEST SHADOW

OF THE WORLD

Every morning and afternoon a huge triangular shadow comes out upon Tenerife island and the sea when the sun is going up, projected by Teide. It's the biggest shadow in the world projected on the sea!

AGRICULTURAL STARS

MANY CONSTELLATIONS IN THE OCCIDENTAL CULTURE

are known with names related to Greek mythology (Orion, Heracles, Andromeda, Cassiopea, etc.). However, everyone can give a personal interpretation of the sky, according to personal needs and fantasy.

This is exactly what happened in the Canary Islands, where local shepherds and farmers drew their own constellations, related to agriculture. According to the local farmers: “Las Cabrillas” (The) go always in the front, followed by “El Pastor” (The Shepherd), which is very shiny. And in the end, comes “El Arado” (The Plow”.

Las Cabrillas (a) correspond to what we call the Pléyades, El Pastor (b), with its “V” shape, to the Hiades (the head of the Taurus constellation), with the very bright star Aldebaran, while el Arado (c) is formed by the stars of the Orion Bell and Sword.

Close to El Arado, there is a “Yunta” (a couple of oxes), corresponding to the stars of Betelguese and Rigel, the most brilliant of the Orion constellations.

And finally, it cannot miss the Laborer, the Farmhand: “El Gañan” or “La Gañanera”, the brightest star of the sky (what we call Sirio).

The rural canarian sky was not only hosting agricultural objects and laborers, but it was also used for meteorological predictions. For Canarian farmers, and for Canarian inhabitants in general, water has

always been the most important treasure. Water was essential for animals and for cultivation, and stars were used by farmers to predict the coming of water. For example, Venus was known as “La Estrella del Agua” (The Water Star). It was a very important “star” (remember that Venus is actually a planet), since it was considered a “water herald”. Many farmers say: “When the Estrella Venus runs towards the North, the rain comes”. It was believed that when Venus is moving towards North (so when it appears during the early evening), it is signaling the coming of storms and rain, and therefore water. On the other hand, when Venus is “running towards the South”, it is a bad signal, and it means a dry year.

THE 2ND BIGGEST CARNIVAL

IN THE WORLD

The Tenerife carnival is known as the second biggest carnival of the world, after the one of Rio de Janeiro (Brazil). The dates of the carnival in Spain are set following the lunar calendar. Carnival’s beginning is calculated based on the Easter dates. In the Northern hemisphere, the Sunday after

the first full moon which occurs after the spring equinox is Easter Sunday. One week before Easter Sunday, there is Palm Sunday. Exactly 40 days before Palm Sunday, it occurs the “Shrove Tuesday”, which marks the end of the Carnival, while its beginning is set 5 days before, in the “Fat Thursday”.



MOON AND THE DEAD MOON

PRAJAPATI DHAKSA HAD 60 DAUGHTERS

A long time ago, in the Kerta Yuga era: 18 of them were married to a Rsi (a term for highest priest) named Kasyapa, 12 of them were married to Dewa Chandra (the God of the Moon), and the rest were married to other highest priests.

Dewa Chandra, who married 12 of the Prajapati Dhaksa's daughters, was not fairly sharing his love among all the wives. Two of the wives were not feeling loved enough, and reported their condition to their father. Hearing

the bad report from his beloved daughters, Prajapati Dhaksa got very angry at Dewa Chandra, and he cursed him to die in 15 days. Until the death day, Dewa Chandra would have lost his light slowly,

So God Chandra will shine becoming a dead Moon.

However, the remaining 10 wives were very sad for the fact that Dewa Chandra was dying, and they prayed to God Siva to revive Chandra from his death. Finally, God Siva granted the wishes of the 10 wives, but still could not avoid

Prajapati Dhaksa's curse. brighter and brighter for 15 days, and the brightest moment of his light is called Full Moon (or Bulan Purnama). But after the Full Moon, his light will slightly turn into darkness within another 15 days, and the darkest moment of his light is called Dead Moon (New Moon, or Bulan Mati, or Tilem).

That is the myth explaining why Full Moon and Dead Moon happened in Bali, and why the period is believed to change in 15 days.

FULL MOON IN BALINESE CULTURE

THE FULL AND NEW MOON DAYS HAVE SPECIAL

importance for the Balinese, as their yearly calendar is based on the lunar phases. The Universal peace mantra 'Om Purnamada Purnamidam' suggests: 'From completeness comes completeness as a universal principle'. So by making offerings to the full Moon on a full Moon day, honoring the completeness of the Moon, more of this completeness is invoked in everyone's life. This includes good harvest and abundance, so that the Balinese often plant their crops, especially fruit, on a full Moon day!

Each full Moon is honored by the Balinese people by preparing offerings of fruit, food and flowers, dressing accordingly, visiting the local temple, reciting mantras and holy scriptures, as well as meeting in prayer, ritual and meditation. "Purnama Sasih Sadha", as the full Moon

celebrations are called, usually lasts from morning till midnight.

The connection of the Balinese with the spirit world, the Gods, demons and ancestors is very strong, so that they create their offerings with the utmost attention to detail and a loving spirit of thankfulness, not only on full Moon days, but actually every day! Wherever you go in Bali, you will see women producing colorful offerings made of palm leaves, flowers, incense and food for their household, their temple and special celebrations with highly symbolic and ritual meaning.

On full Moon days Balinese dress up in traditional attire of sarong and white shirt for the men, and sarong, corset and a white lace jacket for the women, with a colorful belt around the waist.

They take their offerings to the temple, perform sacred rituals including holy water, incense, flowers and prayer, and then they offer them to the Gods, which are believed to live in stone thrones inside the temple. The Gods of the temple are dressed in yellow robes too. After the offering, the priest gives the respective person blessings and applies purified water and a few Bija, wet rice grains, on the forehead to strengthen the connection with God. The rice grains are a symbol of the seed of life and the syllable Om, the seed sound of the Universe. Furthermore, full Moon rituals include bathing in holy water fragrancd with frangipani flowers. The temples can become quite crowded on these days. Bathing in the holy waters is believed to cleanse the aura, wash away all sins and allow the person to remain youthful and attractive.

LET YOUR IMAGINATION FLY WITH...

Stories from Bal, Indonesia

DEWI RATIH
AND KALA
RAUWISNULOKA WAS A
KINGDOM IN HEAVEN

Only the Gods (or “Dewa”), and the Goddesses (or Dewi”) lived in the Wisnuloka kingdom. Humans did not live there, they lived on Earth. On Earth there was a kingdom named Balidwipa, where no humans lived... The inhabitants were giants! The king of the Balidwipa kingdom was Kala Rau (in Javanese, Balinese and other cultures influenced by Hinduism, Kala Rau is also known as Batara Kala). He was the biggest, the strongest and the meanest giant. Both giants, and especially humans, were afraid of him! One day Kala Rau fell in love with Dewi Ratih. She was the most beautiful Goddess, and was also known as the Goddess of the Moon. However, Dewi Ratih did not love Kala Rau, and she rejected his marriage proposal. Kala Rau was so angry that he wanted to attack the Wisnuloka kingdom. The king of Wisnuloka, Dewa Wisnu, tried to calm all the gods and the goddesses. He said: “Do not worry. I know how to handle Kala Rau. I have prepared *Tirta Amerta*. It is the water of life. Everyone who drinks this water will live forever. In this way, you do not have to worry that Kala Rau kills you. After you drink the water, you will never die.” However, one of the giants heard about *Tirta Amerta*, and he reported it to Kala Rau.

“Ha..ha..ha..Now I know how to marry Dewi Ratih. I will use their secret!” said Kala Rau.

Dewa Wisnu gathered all the gods and the goddesses in the palace. He put the water in the jug, and

he asked them to take turns in drinking the water. One by one, they drank the water, and they all felt very fresh. When it was time for Dewa Kuwera to drink the water, Dewa Wisnu felt that there was something strange with him. He was bigger and taller, and he was also smelly. Dewa Wisnu did not know that he was not the real Dewa Kuwera: he was Kala Rau, disguising as Dewa Kuwera! When the fake Dewa Kuwera was about to drink the water, the real Dewa Kuwera showed up. Dewa Wisnu immediately understood what was going on. He took his arrow, and shot Kala Rau at the neck! The shot was so powerful that it cut and separated the head from the body. Then Dewa Wisnu threw the body back to earth. The body became a *lesung*, which is a mortar that people use to pound the rice.

And what about the head? Unfortunately, Kala Rau managed to drink a sip of the water. His head could live forever, although it was already separated from the body. Dewa Wisnu immediately threw the head in the sky. Up in the sky, the head of Kala Rau was still looking for Dewi Ratih, and when he saw her, he tried to grab her. But he did not have hands, so he used his mouth to catch Dewi Ratih. And he succeeded! He swallowed Dewi Ratih! But since he did not have any parts of the body, Dewi Ratih could finally escape. In the moment when Dewi Ratih was being swallowed by Kala Rau, the Moon became dark. After all, she was the goddess of the Moon, right?

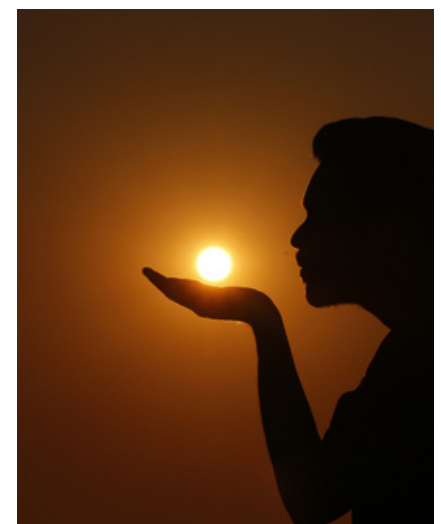
People on earth hated to see the dark moon, so they pounded Kala Rau's body, which had been turned into a *lesung*. When people pounded the *lesung*, Kala Rau felt the pain, and he escaped.

Even now, when there is a Moon

eclipse some people still pound *lesung*. They believe that Kala Rau is still chasing Dewi Ratih.

A slightly different version of the story involves Lord Surya and Lord Chandra, the two gods representing the Sun and the Moon. According to this version, it were these two gods that discovered Kala Rau in the attempt of drinking the water. They shouted, and so Lord Wisnu cut Kala Rau's head. For this, Kala Rau held a grudge against Lord Surya and Lord Chandra, and he swore that he would have forever chased and devoured the two gods. Sometimes, Kala Rau succeeds in annexing Surya and Chandra, and this is when a solar eclipse or a lunar eclipse occurs.

The story of Kala Rau swallowing the Sun was recorded at Candi Belah in Gempol, Pasuruan, East Java. The book “10 Ages of Eclipse Trails in the Archipelago” (Kompas edition, 2016, pg. 16) reports that the reliefs on the temple, a relic of the Mataram Kingdom, depict the giant figure of Batara Kala about to swallow a medallion or circle. Under the circle, there are two figures interpreted as the Surya God (the Sun God) and the Chandra God (the Moon God). The sphere is thought to be the sun or moon.



LET YOUR IMAGINATION FLY WITH...

Stories from Bali, Indonesia

THE MOON

A STORY FROM PEJENG VILLAGE

Once upon a time, in the sky of Bali, it was believed that there were seven moons. One day, one of the moons fell down in a village called Pejeng, in Gianyar Regency, Bali. The moon sat in a big tree's branch, and the moon's light was so bright at that time that the thieves could not do their actions. The thieves felt angry and harmed because of the moon's light. In the end, the thieves climbed the tree and peed on the moon to obscure its light.

At that point, the moon broke down, and only 6 moons were left. This belief on the 6 moons explains why Galungan Day always comes every 6 months (Balinese months). According to the legend, the biggest part of the broken moon fell down in the Pejeng Village. This remaining piece of the moon is "Nekara", a sacred object preserved until today. The temple that preserved the Nekara is called "Penataran Sasih" (Sasih means Moon).

The name Pejeng Village in Gianyar may not be familiar to tourists. However, it is known as the center of government of a large kingdom in ancient Bali. Its name is known through

reports from a naturalist from the Dutches, namely G.E. Rumphias. In a report titled "Amboinsche Reteitkamer", Rumphias mentioned the name of the village of Pejeng. He also mentioned the existence of bronze drums, which became more popularly known as the Pejeng Moon (the Nekara). The discovery of the Pejeng Moon then becomes the first step to uncover the hidden history of the Pejeng Village. At the beginning, the drum was considered a meteorite, and no one in the local community dared to move him, for fear of disaster. However, after further investigation, the Pejeng Moon turned out to be made of bronze metal.

THE BALINESE CALENDAR

ONCE UPON A TIME

there was a very well-known king named Kulo Giri. He had two beautiful wives named Dewi Sinta and Dewi Landep. When Dewi Sinta was pregnant, the king went to the Earth to meditate, and after years of meditations, Dewi Sinta gave birth to a son, named Watugunung. Watugunung grew bigger and bigger, like the other boys. When he was a kid, he was a very naughty boy. One day, he was playing in the kitchen and disturbed his mother, Dewi Sinta, who was cooking. His mother was very angry with him, and she hit Watugunung's head with 'siyut', a spoon used to take the steamed rice. The wound left heavy marks on his head. After this, Watugunung was very sad, and decided to leave his home.

Watugunung went everywhere, to learn and study about everything.

He grew up and became a handsome boy. He was very powerful, since he was a descendant of a the gods, and with all his power he started to attack the neighboring kingdoms. The first kingdom was the one where Dewi Sinta lived, and it was defeated. After the victory, Watugunung married Dewi Sinta without knowing that she was his mother. One day, Dewi Sinta saw the marks on Watugunung's head, and she suddenly remembered what happened with her son in the past. She was convinced that he was his son!

Watugunung was very strong, and he fought with another kingdom, Dewi Landep's kingdom. After Watugunung's victory, Dewi Landep became his second wife. Watugunung continued to fight again and again, against other kingdoms.

After he won all the battles against the kings and queens of these kingdoms, Dewi Sinta asked Watugunung to find another wife to serve him. She knew that it was a shame to be married with her own son, and she knew that

Watugunung was very strong, so she had to act smartly. Therefore, Dewi Sinta asked Watugunung to get God Wisnu's wife, Dewi Nawang Sasih, as his third wife. Watugunung decided to please Dewi Sinta, and he fought very hard with God Wisnu, but he lost the fight, because he fought with a God. After his death, Watugunung was thrown away into the ocean.

After God Wisnu won, the authority of the kings defeated by Watugunung was returned to them, but each king and queen had sovereignty only for 7 days. This is why the Balinese calendar uses a system of 210 days (27 defeated kings, plus the two wives of Watugunung, plus Watugunung himself, who was included in the count, for a total of 30 people). This system of calendarization, called Wuku, is still used in Bali, Java island and Sumatra. It is also known in south east Asia, especially south of the equator line. In Bali it is still used to find Dewasa Ayu', the best day for paddy's harvesting, marriage, going to the sea, building a house, and so on.

THREE CALENDARS

EVEN THOUGH INDONESIA USES THE GREGORIAN CALENDAR

like almost everybody else in the world, the Balinese also use their “native” calendars to define their holidays, rituals and ceremonies. When the Balinese want to set a date for any ceremonies such as a wedding, tooth filing, cremation, or even just the blessing of a house after construction, consulting a priest to find a “*Hari Baik*” (good day) is a must. Otherwise Balinese fear that they will face bad luck.

The Balinese native calendar uses two systems that can be complex and confusing even to the locals.

Fortunately, a modern paper calendar is widely available in the island, consisting of printed dates of Gregorian, Pawukon and Saka.

SAKA CALENDAR

DERIVED FROM THE ANCIENT HINDU CALENDAR

Balinese life is inseparable from the ceremonial routine that includes offerings as one of the main elements of the ritual. Therefore, the Saka calendar was also designed to maintain the availability of crops for the ceremonies. The calculation of Saka is pretty complicated to understand, as it is based on a combination of analysis combining the solar system, lunar system and other local

elements. This calendar has 12 months with 354 or 355 days per year. Full Moon falls in the middle of every month as a regular sacred day where Balinese celebrate Purnama. Most of the temples are packed with worshipers, and some roads in Bali might be closed due to the Purnama ceremonies. Balinese wear their traditional dress and carry their offerings to their temple. Sacred dances, puppet shows, and other rituals are usually performed in prominent temples during Purnama.

PAWUKON CALENDAR

ANOTHER CALENDRIC SYSTEM

that works similarly to an astrological calendar in the western world. This calendar has 210 days in a year, which is divided into 30 weeks, with seven days for each week. It is believed that people born in a specific week will have some identical physical condition, character and fate. But this is not the only function of this calendar, since Pawukon is also used to predict important religious events in Bali, such as Galungan, Saraswati and Kuningan. This calendar is believed to be rooted in the ancient rice-growing cycle.

BHATARA SURYA

THE GOD OF THE SUN

He is the foundation of all living beings in this world, especially plants and animals. Bhatara Surya is known to be very powerful, and it is known that he is always happy to give his heirlooms or charms to the ones he chooses. This

god is famous for having many children from various women (including Dewi Kunti, who gave birth to Adipati Karna in the Mahabharata story).

One day Anoman blamed Bhatara Surya for the incident that happened to his mother, Dewi Anjani, who was cursed by her own husband. Anoman felt that Bhatara Surya was responsible, so with his spell he collected clouds from all over the world to cover all the realms, so that the solar light could not reach the earth. Fortunately this incident was resolved properly, so that Anoman volunteered to get rid of the clouds and the natural world was exposed to sunlight again.

THE STORY OF DAY AND NIGHT

SANG HYANG EKA JALA RSI HAD TWO SONS

namely Sang Hyang Ketu and Sang Hyang Rau. Sang Hyang Ketu had a “Widya” character, which means bright, honest, and kind. On the other hand, Sang Hyang Rau had an “Awidya” character, which means dark (darkness), or less good.

This widya nature, this light, is what illuminates the Earth for 12 hours: it is what we call daylight. Instead, the awidya possessed by Sang Hyang Rau, who has a dark nature, is what causes the night during the remaining 12 hours. This is the origin of the occurrence of day and night.



STARS TRAINING COURSE

06 - 12/11/2022 in Bali, Indonesia

TESTING

STARS METHOD TOOLS

created in the first phase of the project as well as sharing, learning and providing inputs for further development of the methodology were among the main goals of STARS Training Course. It took place from the 6th to 12th of November 2022 in Ubud, Bali, Indonesia and brought together 24 youth leaders and workers in the field of youth from Tenerife (Canary Islands, Spain), Bali (Indonesia) and Guadalcanal (Solomon Islands). Stars, non formal education, astronomy, astrology, legends, heritage and sustainable tourism

were the most frequent words in these 7 days of trainings that by sharing our heritage, learning about the sustainable tourism and stars brought us closer than any other training ever has! Here you will find our favourite activities.

"STAR-ICE BREAKERS"

BREAKING DIFFERENCES: HOROSCOPE

To start it is necessary to explain the astronomical base of where the horoscope was invented. The participants organized by their horoscope symbol (day of

birth). Then, according to the different movements of the Earth they realized that their symbol could be different than expected. A good way to break the differences and widening the comfort zone, as we realize that some of our traditional beliefs might be based on ancient interpretations that we do not stop to question.

"STARS BINGO"

One of the presentation dynamics. Each participant had to find one person for each of the statements of STARS BINGO. The winner was the fastest to complete all the fields. Then we checked in group who corresponds to each statement.



STARS TRAINING COURSE

Bali, Indonesia

VILLAGE RALLY

ACTIVITY TO DISCOVER UBUD

To complete the group creation and foster cooperation among participants, we prepared some challenges to solve in mixed groups, meanwhile visiting the historical center of Ubud and the traditional temples. The participants had to interact with locals and manage to get an egg by talking the official language with the help of the Indonesian participants. We will use the egg in the next activities!

GAMIFICATION

WITH HERITAGE INTERPRETATION

We continue introducing more concepts connected to Heritage Interpretation in a practical way: The participants had to create the main letters of TORE, the 4 keys of the heritage interpretation by Sam Ham, with their own body: Thematic, Organized, Relevant and Enjoyable. A great example of

outdoor education!

For explaining the aspects and use of gamification we run a workshop called "STARS EGG SHIP" where the participants have to work in teams to design and build a "spaceship" that protects the passenger egg and lands safely. The egg was the one bought yesterday in the local market. The participants had to give a name to the egg and paint a face on it.

The idea of the exercise is that each team have the same resources, in this occasion, 3 sticks, 3 leaves, some string and a rock, and with all this elements, they have to combine to create the "spaceship" that protect the egg.

After a good session of teamwork the participants launched the spaceship, with the egg inside, in the landing area (market with leaves on the floor), from around 3 meters altitude. Despite the sad results of this landing (only one egg survived), the conclusions lead to reflecting on the importance of the process, teamwork, creativity and the solution seeking skills.

DESIGNING

TOURISTIC ACTIVITY

Participants split into groups have to design and implement with the rest of the group several games with learning outcomes. They have to design the activities with the resources available nearby. Suddenly all surroundings become full of opportunities and resources... You just have to see it!

Identify how to integrate elements of non formal education in a fun and attractive activity at the nature!

This is also a great way to "be in the shoes" both of facilitators and participants.

For example, one group used the senses to identify the spices and plants of the surroundings, another used sound to guide the participants across the rice farm, and the other did storytelling to solve a mystery. It was fun and actually - in a playful way - they created several fun touristic products and tested them between the group.



STARS TRAINING COURSE

Bali, Indonesia

OPEN SPACE
THEATER

ASTRO LEGENDS

We moved to an open space at a park to work with groups about the heritage that appears on the local legends connected with the stars and the sky.

In mixed groups participants choose a legend to represent in an improvised theater play, to share with the group more about the different heritages. Each group had some time to prepare the play, and rehearse.

They decided to play the main elements of the legend in different ways: some with just mimicry, another group with a storyteller to explain the legend.

Afterward participants explained and opened a debate about the elements of the play and the myths. As the group felt very comfortable it was a very simple and cool way to enjoy and learn about heritage. Some participants shared that it was a modern and fun way to “make the legends alive”, other told that it helped to understand deeper their own legends they already knew.



HERITAGE

INTERPRETATION...
AGAIN! :)

We did a practical exercise in a temple complex near Ubud. There the Balinese participants guided several groups of participants to explain more about their religion and traditions. It was a great chance to share and ask about the daily life, culture and beliefs.

This way of working was one of the stronger points in the training course, as each participant had the chance to work as a real guide, apply all new competences they just acquired, and reflect about how they can use it in their future.

We finished with a debriefing about the importance of cultural heritage interpretation and evaluating the guiding exercise conducted by the local participants, identifying how they apply the practical aspect we have learned so far. Participants realized that already have all the cultural knowledge, they just need to organize it, follow the topic, focus on the relevant and - the most important - make it enjoyable for everyone.

RISK
MANAGEMENT

WORKSHOP

In Tegallalang rice terrace we used the chance to do a practical exercise about risk management, in a practical situation.

It had been raining and the land was wet. So, we asked the participants to debate and decide if it is safe to do the planned hike or not.

The participants in groups had to evaluate and scale the risk of a proposed hiking activity at the rice terraces.

They had to assess the probability and consequences of several aspects. First they brainstormed about all possible scenarios where something can go wrong. Then they gave points from 1 to 5 the probability that this accident may happen, and 1 to 5 the consequence of this accident.

That way we had a numeric scale that measures the risk.

Focusing on the higher risk activities, now we could evaluate how to reduce it: either by decreasing the possibility the accident happened, or by taking preventive measures. Or reducing the consequence of it, by preparing mitigation actions.

After evaluation, they decided to scout the route and to identify more possible risks.

Afterward we had a closing debate to evaluate if the activity is safe enough to run it with a tourist group.

STARS TRAINING COURSE

Bali, Indonesia

GUIDING

IN NATURE

After the risk management workshop, we identified the risk and proposed mitigation actions. So, we can handle and assume the minimum risk that activities in nature always have.

Now is time to apply what we have learned, and again we had a chance to become guides ourselves.

We did the terrace walk in a practical way: in small groups the participants had the chance to experiment how to guide a group in nature and how to overcome the obstacles ensuring a safe experience for all.



ASTRONOMY

INTRODUCTION

To continue we did some workshops, dynamics and presentations to introduce the theoretical concepts about astrophysics and astronomy in order to better understand the stargazing sessions we are preparing.

We had the help of some participants that are stargazing tour guides to explain the basic elements of physics, like the creation of a star and galaxies and how the light travels from a star to us at earth.



UNIVERSE

WALK

We integrated theory and learning concepts in a short interactive hike: the Universe Walk.

By counting the steps made during the hike, we explained the main stages in the creation and evolution of the universe, giving a sense of time and space. We had the opportunity to think how small are the humans, if we look at us at another scale. For example, it takes hundreds of steps to go from the point where the big bang happened at the origin, but only the last centimeters of the hike condense all the history of humanity.



STARGAZING

LINKING THE USE OF LAZERS, APPS AND OUR CULTURAL HERITAGE



We learned the use of astronomical lasers, how to guide a stargazing observation, and how to link with our local legends and traditions. Some tips we learned is to focus on what we can easily see and identify: the brighter stars, and from there we can “navigate” to identify the closest constellations and use that attention to explain the legends linked with that particular constellation that we want to share. We also learned to use the mobile phone apps (Stellarium, Starwalk2, Skymaps), that use the mobile compass to identify objects in the night sky and help us as guides to recognize the constellations correctly.

The next morning we split into mixed groups to develop a dynamic related to learning astronomy. For example, one group designed a quizz game with gymkhana elements. Other made an improtheater about how gravity collects elements in space to create a star. They made a visual representation of how the star was born and evolved with time reaching different colors depending on their composition. We had a debate if these proposed dynamics can be used with a group of youngsters or tourists and how to do so.

JOB SHADOWING

14 - 20/11/2022 in Bali, Indonesia

FINDING

GOOD PRACTICES

of sustainable and eco tourism in Bali was the main goal of the job shadowers visiting projects related to our partner IPBI.

In the starting point - the most touristic city of Bali - we spent just an hour to pass by numerous small tourism businesses offering touristic activities all around the island to double-check: nobody had anything astro tourism related.

It's a free niche in Bali!

CREATING

SUSTAINABLE TOURISM

activities in less developed tourism areas of Bali is one of the tasks of the IPBI Tourism Management students. We were happy to join their visit to Medewi.

The first activity that we visit is a visit to design a hiking route towards a crazy river, which ends in a bathing area and a small waterfall.

The proposal is complemented by the accompaniment of a local guide, and a cooking experience

in a bonfire of rice with spices, cooked in bamboo poles. The proposed route offers the possibility of ending up visiting a local farm, and trying some of the crops, such as pure cocoa, coffee, fruits, and spices.

Another of the activities that the youngsters have explored is the sale of local sweets made from coconut in tourist accommodation. As well as traditional basketry made with coconut leaves.

At night we evaluated the night sky that can be observed on the coast, and we have verified that it has a good potential for observations of astro tourism in the dry season, the one with the greatest influx of visitors.



STARS JOB SHADOWING

Bali, Indonesia

Medewi area has many positive aspects that make it suitable for an astro-tourism activity;

Objectives:

To identify and test the viability of different sustainable tourism experiences proposed by students.

Conclusions:

The route that we have carried out together with the students does have a lot of potential to become a marketable tourist experience, and with an economic impact in rural areas. Several aspects have been taken into account, such as risk assessment, accessibility, and local impact.

The cost of implementing the activity is very low, and it could be offered to accommodation in the area, as a complementary activity, with a local guide, and as part of an activity pack.

The Medewi area, as well as other rural coastal areas, offers very favorable conditions for the development of astro tourism activities, especially in the dry season, from April to October.

The wide horizon over the sea, the possibility of combining sunset watching with stars, the location of the accommodations near the coast, the low light pollution, and the comfortable temperature at night, make the experience very positive for future clients.

HOPE OF

TUMBALEN KIDS

We visited the Dukuh school near Tumbalen that is located in a rural area with limited access.

Despite being nearby to several points of touristic interest, such as several hotels full of scuba divers willing to discover

beautiful underwater world, the school has no teachers that give language lessons.

So recently thanks to a project supported by IPBI, some volunteers cross the island in a several hours long car drive to give English lessons twice a week for local pupils as a way to give then an opportunity to enter in the tourist labor market.

Objectives:

To visit and evaluate the project of English di Kampung for local Dukuh school.

Conclusions:

Thanks to this visit we have developed a further proposal to connect a local school at Tegueste, a rural area of Tenerife with an aim to communicate between the students and, thus, motivate them to learn English. We aim to establish a "brotherhood" with Kuduh school, and develop learning activities together, we are happy to have this supported also by the corresponding city council in Tenerife.

We also have donated learning materials for the school, and managed to find new donors that give some economical support to the project, so it can be implemented in more rural schools, potentiating the touristic services of the area to be provided by the local people that are able to communicate in English.

MOUNT BATUR

SUNRISE

hike is the touristic experience that we have identified as the closest to astro tourism in Bali. It is a very popular experience, and we want to check if it is

possible to combine with a stargazing activity to improve the experience and benefit from a well known tourist offer.

One of the teachers of the IPBI has prepared a night hiking route, visiting several spots that can be used for stargazing.

The possible stargazing spots that we visited are viable and offer a wide view combined with mount Agung and lake Batur views. We were surprised to learn that the houses covered by lava on one side of the mountain, thanks to their resistance to such a harsh destiny, are known as "the stars of Batur".

The weather in the rainy seasons can limit the observation days, so the activity can be run most likely during the dry season, that is also the high season for visiting tourists.

Mount Batur at sunrise is a very popular destination, and can be already crowded, so the stargazing needs to be implemented before the sunrise hike, or even as an extra activity for the glamping accommodations near the top of mount Batur.

Objectives:

To identify possible stargazing spots, and viability of a combined experience of hiking and astro tourism in a well known tourist object.

Conclusions:

Stargazing as a new touristic offer can help to diversify otherwise identical offers of all the guides, however, our reflection with the IPBI went around admitting the fact that bringing stargazing to some less touristic destination probably would be more beneficial for the local community.

STARS JOB SHADOWING

Bali, Indonesia

VISIBILITY &

MERCHANDISING

are some of the key aspects of the implementation of astro tourism in Bali and starting new tourism experiences and pack.

As a good example of visibility and sustainable tourism marketing, we visited a community owned organic farm that offers cooking lessons combined with the farm visit.

Mai organic farm is one of the best evaluated experiences online, and discovered how they manage to sell this experience that now have more farms following this success model.

Objectives:

To visit a success model of sustainable tourist experience and to learn more about ways of merchandise it.

Conclusions:

We enjoy a very well designed and structured activity. With a key concept of local development, with a very adequate interpretation of the natural and cultural resources present. A local and close treatment and a feeling of identity at all times.

We recommend a visit by IPBI students as a model to follow for sustainable tourism based on community. "Airbnb experiences" is also a great tip for the young entrepreneurs willing to reach directly a high number of potential clients.



NUSA PENIDA

STARS

During our visit to Klungkung Regency tourism office we have been recommended to visit Nusa Penida island as one of the potential places to implement astro tourism, as it is less populated and much less light pollution than other places in Bali. We have spotted several places on the coast and possible hikes inland of Nusa Penida to explore the viability of combining hiking activities with stargazing.

Objectives:

To identify viable spots for stargazing and astro tourism pack experiences.

Conclusions:

Despite the most known tourist spots in Nusa Penida, almost all the island present optimal spots for stargazing, especially at the coast. The small local based accommodation offer, is very suitable to host stargazing activities, as the weather allows to stay long and comfortable during the night, and the light pollution is minimal.

We consider that promoting stargazing in such places has more value than in already highly touristic destinations as can help bringing more sustainable tourists.



PELAGA

ECO PARK

Pelaga eco park offers glamping accommodation and guided tours in a forest area.

The facilities they have and the philosophy of the sustainable tourism product they proposed is perfect to host astro tourism activities combined with their offer of glamping in the forest. Following the worldwide tendencies and intentionally have set the place as "instagramable": there are especially created photogenic spots for taking pictures.

Besides, they are also trying to make more "instagramable" tea with similar drawings as on coffee and unusual tea color.

However, what we like the most about the place is that everybody working in it are neighbors who, firstly, helped to build the place and now, secondly, are learning to be sustainable tourism workers.



MULTIPLIER COURSES

23/12/2022 and 19/02/2023 in Bali

BALINESE

PARTICIPANTS

denominated their multiplier event "International Event Stargazing Within Tourism" and held it twice with a total of 50 participants: 20 youngsters in December 2022 and 30 participants in February 2023. It aimed introducing new insights and knowledge to the field of astro tourism, management, and empowerment. Several methods were used in these activities during the learning process, such as gamification, video presentations, and learning by doing.

After STARS Bingo ice-breaker, there was an introduction about STARS and its purpose and the activities we have done during the STARS project to give the participant a clear picture of what the program is about.

It was followed by astrology explanation. This session was done through a game called "Egg Horoscope Hunter", where we hide the eggs which represent



horoscopes in the closest area. The participants had to find out all of the 12 egg horoscopes and sort them in order. Besides learning, this session also helped them to know each other better and work in a team.

Afterwards came Balinese legends and astronomy. We chose several Balinese legends that are related to astronomy. The participants were divided into teams and had to choose one of the legends to be presented in a short drama.

To finish: stargazing and astronomy explanation. We did stargazing outside where we explained to the participants about the stars and planets, and taught them about using lasers, and also the "Stellarium" app.

This activity had a lot of positive

impact. The knowledge gained was easy to understand and useful for the participants. In addition to broadening knowledge about astronomy and astrology, this activity also built cohesiveness and cooperation among participating members as well as expanded the network of relationships among participants. The combination of local culture and astronomy made learning more meaningful and interesting. For STARS Multiplier participants, the non-formal learning method was something that attracted attention and made it easier to understand astronomy and astrology. This activity provided new insights and knowledge. Thanks to the method applied to make the learning atmosphere more easily and unique, the activity provided an unforgettable experience.



MULTIPLIER COURSES

02/03/2023 in Guadalcanal, Solomon Islands

SOLOMON PARTICIPANTS

developed "Sustainable Tourism Agents in Rural Societies (STARS) in astro tourism" multiplier course on the 2nd of March 2023.

A 1-day workshop was held for 31 young people from various youth organizations at National Youth Council to empower and create job opportunities for young people in rural settings.

The programme had two components: Community Based Tourism (CBT) and astro tourism. CBT focuses on identifying potential attraction sites as hiking and trekking routes to waterfalls and caves or historical sites whilst astro tourism is related to astronomy and astrology that can be recorded and documented.

The CBT initiative hopes to promote social sustainability by involving young people in local communities to assist: manage their own resources, provide meaningful employable opportunities, cultural preservations and engage in environmental conservation efforts.

The model can be adopted by individuals or communities by engaging in preserving and conserving tangible and intangible heritages in tourism operations locally. It upholds cultural values that continuously erodes for the sake of development and exploitations in this error.

The training had two goals. First, by the end of the workshop, young people and youth leaders to be fully equipped and understand the concept CBT and astro tourism. Second, "know how to" or can adopt the concept/model locally.

After STARS Bingo icebreaker, an introduction in tourism concept was done by brainstorming in small groups and final conclusions.

It was followed by a powerful presentation on how does STARS methodology impacts on local communities, natural resources and creates employability in rural setting.

Afterwards, a group activity was given to the participants by breaking up into 4 groups and brainstorm the differences between 'astrology' and 'astronomy' and followed by group presentations.

A session on the importance of astrology and astronomy as attractions for tourism was introduced to participants. In exploring astro tourism concept, participants learn about essentials of astrology and astronomy in preservations.

Introducing astro tourism activities is a new concept in tourism operations in the country.

High lighting astronomy connections to the astrology. Basically, astrology in local context is related to myths and legends. More likely, custom stories that are related to astronomy, for instance, the moon, sun, stars constellation. In astro tourism 'experience' is crucial and visitors value authenticity.

Participants made aware of the importance of intangible and tangible cultural heritages that can be in-rotate in the offer. And steps/tools on how to record and document attractions were shared with young people.

To finish, the participants in small groups dramatized Solomon Island sky-related legends and had a plenary on how to adapt the learnings to their reality.



MULTIPLIER COURSES

02/03/2023 in Temerife, Canary Islands

CANARY

PARTICIPANTS

focused their multiplier course on "Volcanoes, bats and stars" on the 1st of April 2023.

The afternoon started with a non formal education energyzer and an interesting information about traditional fishing. Then, the group did a cleaning activity: picking up the garbage we found on the way from the town square to the lighthouse. We had the opportunity to enter the lighthouse building, explore it and enjoy a sunset accompanied by a picnic of local products.

We then attended a talk about bats in the Canary Islands and ended the evening with a stargazing session about astronomy and the cosmogony of our ancestors - the Guanches.

The activity was a collaboration of the participants and several collaborating organisations.

Overall, we believe that the impact was very positive as we managed to develop an environmentally, socially and economically sustainable activity.

It has been environmentally sustainable, as we collected all the rubbish we found in the surroundings, cleaning the environment of plastics, fabrics and cigarettes mainly.

In addition, we provided environmental training to the participants on the benefits of sustainable fishing and the importance of protecting the island's native bats. We also promoted local economic development by collaborating with local businesses and organisations to provide participants

with transport, catering and training. Therefore, this type of education through sustainable playful activities, generates a memorable memory in the participants and creates a social bond: all together learning and leaving a positive impact not only on the place, but on each other.

The participants were very interested in the talks and games. The most popular were the ones about bats and astronomy, because of their lack of knowledge. They were curious and asked many questions. During the astronomy chat we told the legend of Canopo, a star that marked the beginning and end of the "Guanche" (ancient aborigins of the island) year, and we showed them in the sky with a laser. The participants were very grateful to learn more about their ancestral culture and became more aware about the importance of perserving it.



ROLE MODELS

Bali, Guadalcanal, Tenerife

BALI

ROLE MODELS

definitely are STARS partner's students that in a framework of their Tourism Management studies regularly visit Bali's rural areas to help them designing sustainable tourism activities.

Although the their studies are academic, the fieldwork is developed in a non formal way: conversations, observations, brainstorming... The local farmers look at the young people with hope, being open to their ideas and development.



So far, the offer in for example Medewi is limited to small tourist accommodation for surfers. The youngsters explore the economic feasibility of various sustainable tourism ideas. For more details, have a look at the job shadowing visit to Medewi!

SOLOMON

ROLE MODEL

was a bit trickier to find as tourism isn't very developed in the country,

Therefore, first of all, there has to be done training and sensibilization about the importance of the sustainable tourism. The youth worker and our dear partner Tessa has taken it into her hands!

Thanks to her in collaboration with the previous and this project, the Solomon Islands have



a group of youth leaders informed about these topics, also the first hikes developed and - bringing it to the Governmental level - some previous and hopefully also further support for dynamizing the sustainable tourism in rural areas with Community Based Tourism values!

CANARY

ROLE MODEL


goes to Darío! Not only he has helped a lot the STARS group to always be in a good mood, but also he is trully passionate about astro tourism.

We really enjoyed and benefited from his "know how" during the training course as - meanwhile most of us are dreaming to organize stargazing one day and like that to our future job - Darío is already working as a professional tour guide, showing people the natural and cultural heritage of the



Canary Islands.

His help was also essential for the STARS Multiplier Course in Tenerife and our amazing video that got viral on Instagram!



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STARS SUSTAINABLE TOURISM AGENTS



STARS PROJECT