

# Embracing weather

Winners of the Standard Chartered Weather Photographer of the Year share their tips for success with **Hollie Latham Hucker**

**B**ack in October, the Royal Meteorological Society announced the winners of the Standard Chartered Weather Photographer of the Year 2024 competition, and we saw some breathtaking images. One particular image proved very popular and took our social media channel by storm – it was ‘Sprites Dancing in the Dark Night’ taken by title prize winner, Wang Xin from Shanghai, China. As multiple thunderstorms raged around Shanghai, Xin travelled to the Chongming District and after a few hours, a ‘faint red figure’ flashed in their eyes and this remarkable image was captured. The judges, an international panel of

experts from the fields of meteorology, photography and journalism, including members of the ITV Weather team, commented that it is rare to see an image with this extent and number of sprites.

Standard Chartered Weather Photographer of the Year showcases the very best in weather and climate photography, with a grand title prize of £5,000 and more prizes for the Standard Chartered Young Weather Photographer of the Year 2024 and Standard Chartered Smartphone Weather Photographer of the Year 2024 categories.

The Standard Chartered Young Weather Photographer of the Year title goes to Angelina Widmann of Bregenz, Austria,

whose winning photo ‘Rain Aria’ captured a stunning shot during an open-air performance of Madame Butterfly on the eastern shore of Bodensee (also known as Lake Constance) in Bregenz, Austria.

The Standard Chartered Smartphone Weather Photographer of the Year winner is Nur Syaileen Natasya Binti Azaharin from Selangor, Malaysia, who had gone out with the expectation of capturing a sunrise but was instead rewarded with this glorious view of smoking volcanoes in East Java, Indonesia.

New to this year’s competition is the Standard Chartered Climate Award, created to underscore the connection between weather patterns and the broader impacts

of climate change. The winner of the first Standard Chartered Climate Award is Gerson Turelly of Brazil, for the photograph ‘Rowing’. Gerson is also the winner of the Public Favourite vote. The image depicts the centre of Porto Alegre, Brazil, during the devastating Rio Grande do Sul floods in spring 2024.

To see more of the excellent images that were entered into the 2024 competition and to find out how you can enter the 2025 competition, simply visit [rmets.org/weather-photographer-of-the-year](https://www.rmets.org/weather-photographer-of-the-year)

Red sprite lightning in the Chongming District of Shanghai  
Canon EOS 6D, 35mm, 4sec at f/1.8, ISO 2000



## Sprites Dancing in the Dark Night by Wang Xin, Shanghai, China The Standard Chartered Weather Photographer of the Year 2024 Winner

Instagram: @a18917431985wx

Photographer Wang Xin had to be extremely patient to capture this magnificent example of red sprite lightning in the Chongming District of Shanghai. Much like the ethereal, fairy-like sprites of folklore, red sprites are particularly difficult to see or photograph. The judging panel commented that it is rare to see an image with this extent and number of sprites.

As multiple thunderstorms raged around Shanghai, Xin travelled to the Chongming District and adopted a trial-and-error approach by setting up the camera and waiting. After a few hours, a ‘faint red figure’ flashed in front of Xin’s eyes and this remarkable image was captured. The elusive sprites only last a few milliseconds, so Xin used a four-second exposure to achieve this photo. Sprites occur due to electrical discharge, but unlike ordinary lightning, they occur well above cumulonimbus clouds, approximately 50 miles (80km) above the ground, in a layer of the atmosphere known as the mesosphere. Due to their fleeting nature, sprites are still not well understood, but they have been observed to occur after a strong, positive lightning bolt between the cloud and ground. The red colour comes from changes in the energy of the electrons of nitrogen atoms high in the atmosphere.

### XIN’S TOP TIPS

**1** The more extreme the weather, the more stunning the photos can be. A successful photo can’t be achieved without accumulated experience and preparation. You should also pay attention to your own safety, which is the first priority.

**2** Don’t miss the strong thunderstorms (there are usually a lot of them in spring and summer); they have more chances to produce red sprites. Don’t be upset if you can’t get it straight away, as I had to go through a lot of failures to get this winning photo.

**3** When photographing red sprites, focus your camera on the stars to get a clear picture. And avoid the light pollution in the city and the full moon, as they will both impact visibility.



A spectacular display of hoarfrost over the Derwent Valley, Peak District, Derbyshire. Sony A7R III, 100-400mm

## Hoarfrost Heaven by Andy Gray, Matlock, UK Main Title 2nd Place

Instagram: @andygrayphotographer

Photographer Andy Gray was especially pleased to have captured this image of hoarfrost over the Derwent Valley as he feels hoarfrost has become rarer in the Peak District. In Old English, the word ‘hoarfrost’ is related to old-age, and so this frost gets its name from its resemblance to white hair. Hoarfrost differs from ground frost because it occurs when the surface is already below freezing. The water vapour immediately freezes on contact with the object rather than first condensing as liquid water and then freezing.

The image was taken during a period of high pressure which led to particularly cold weather. Within high pressure systems (or anticyclones), air is generally sinking which leads to cloudless skies. At night, the lack of clouds means that more heat is lost to

space, rather than being reflected to the Earth’s surface. Winter nights can become very cold, encouraging the formation of frost and mist which can last well after the sun has risen.

### ANDY’S TOP TIPS

**1** Get to know your location’s geography. This will determine common weather characteristics that frequently occur. For example winter inversions are frequent along this stretch of valley. Mist will often occur on cold mornings above lakes and reservoirs.

**2** Plan your visit according to the weather forecast. Use Weather apps such as Windy or Clear Outside. These are a good guide but not always 100% accurate.

**3** I always carry a portable sturdy umbrella, microfibre cloths, a lens hood, shower cape, hat, thermal gloves and head-torch to cover all eventualities. Plus spare camera batteries and SD cards.

## Evening Shower Over the Needles by Jamie Russell, Isle of Wight, UK Main Title 3rd Place

Instagram @Island\_visions\_photography

Photographer Jamie Russell took advantage of sea and air to capture this image: 'Some large showers started developing 20 miles or so to our north-northwest. Realising they could cross The Needles with rainbow potential, we jumped in our rib at Colwell Bay and positioned ourselves with the camera. However, the composition was awkward, and the choppy sea was a challenge, so I sent up the drone, knowing the view would likely be a lot more impressive.' His instinct certainly paid off as he managed to capture two British icons: the white chalk stacks of The Needles and a downpour! To top this image off, the Isle of Wight is perfectly crowned with a rainbow.

Although rainbows are a common optical phenomenon, the correct ingredients need to come together to see one. Firstly, the sun must be behind you, and it must be low in the sky. Secondly, an array of airborne water droplets must be ahead of you. When light travels through a water droplet, it slows down



Evening Shower over the Needles, Isle of Wight  
DJI Mini 3

and changes direction because a water droplet is denser than air—this is known as refraction. The amount that light is refracted depends on its colour, which is why sunlight (consisting of a mix of all colours) is split into the rainbow spectrum when it is refracted. This spreading of the light into the different colours is called dispersion. When the light reaches the back of the water droplet, it is reflected and passes back through the droplet, again being refracted and further

dispersed as it leaves the droplet.

As with all optical phenomena, rainbows are completely unique to the observer, so no two people will have ever seen the exact same rainbow (unless someone like Jamie has been on hand to document it!).

## Volcanoes by Nur Syaireen Natasya Binti Azaharin, Malaysia Standard Chartered Smartphone Weather Photographer of the Year 2024

Instagram @nr.s.n

Photographer Nur Syaireen Natasya Binti Azaharin had gone out with the expectation of capturing a sunrise but was instead rewarded with this glorious view of smoking volcanoes in East Java, Indonesia. Sitting above the low-level stratus clouds, she was afforded a tranquil view of the peaks in the early morning light and snapped the scene with her Samsung Galaxy Z Flip4.

A small pyrocumulus cloud (also known as flammagenitus) sits atop Mount Semeru (central peak in the background) and small plumes of smoke and steam are emitted from the crater of Mount Bromo (front left). Pyrocumulus clouds not only form above volcanoes, but above heat sources such as forest fires and power station cooling towers which cause air to rise. Moisture in the air will condense to form a cloud once the air has risen to a cool enough altitude.

Volcanoes emit small particles into the air which provide additional surfaces onto which the water vapour can condense. Therefore, pyrocumulus clouds can appear more dense than other clouds, being formed of many small droplets. If the heat source is large

enough, deep rising currents of air may form, allowing the pyrocumulus to evolve into a pyrocumulonimbus which, like a cumulonimbus cloud, may be associated with thunder and lightning.

### NUR SYAIREEN'S TOP TIPS:

**1** Smartphones excel in golden and blue hours, where light dramatically transforms a scene. For this shot the soft glow emphasised the raw elements. Use HDR or night modes to balance shadows and highlights and position the light source strategically to enhance textures unique to the weather conditions.

**2** Rain, mist, or storms may seem intimidating, but they offer unique textures and moods. For instance, raindrops on your lens can create an artistic blur effect. Protect your phone with a simple waterproof cover, and experiment with different angles to use these elements to your advantage.

**3** Every weather moment tells a story. Look for elements that interact with the sky, like trees swaying in the wind or clouds framing a volcano. Compose to align horizons or use reflections to create symmetry. Simplicity often speaks volumes, so focus on a singular subject against the vastness of nature.



African dust over Athens, Greece  
Nikon D850 with Nikon 8-15mm Fisheye lens. 15mm; 1/250s; f/14; ISO 100

## African Dust Over Athens by Lesley Hellgeth, United States 2nd Place, Standard Chartered Smartphone Weather Photographer of the Year

Instagram: @lmsmith2

You might be forgiven for thinking that the Parthenon has been magically transported to Mars, but this scene is actually much more down to Earth! This image shows the influence of Saharan dust

on Athens during April 2023 and is a reminder of the interconnectivity of weather conditions around the world, an aspect that particularly impressed the judges.

An area of low pressure over Libya created strong southerly winds that transported the dust from northern Africa to Greece. Hot air from the Sahara also surged northwards, with the high temperatures adding to the unpleasant environment. The warm southerly winds also contributed to a much earlier start to the fire season in southern Greece.

Although the April Saharan dust outbreak was

particularly severe, there had been several other outbreaks across southern Europe in the preceding months. Looking at trends over the past few decades, there is evidence that the number, intensity and length of these outbreaks are increasing. Temperature increases in the Mediterranean and persistent drought in northwest Africa are among the reasons for an increase in dust outbreaks.

### LESLEY'S TOP TIPS:

**1** Embrace the weather you get. I had been hoping to photograph the Parthenon at golden hour and was initially disappointed that the sandstorm was interfering with my plan. Once I realised I was experiencing something far more unique than a sunset, I seized the opportunity to capture it.

**2** Consider the timing of crowds and natural light. A few people on social media have questioned how I captured the Parthenon – an often-crowded location with no people in the shot. From research I knew it would be less crowded towards the end of the day (and the light would be good). It was just a case of waiting while other people posed for their own photos and being ready to snap a photo as soon as they moved out of the way.

### PETER'S TOP TIPS:

**1** When capturing weather, look for an interesting foreground and scenery. For example, a barn or a tree could enhance the photo or show the storm clouds passing over rolling hills. Use the rule of thirds or shoot during Golden Hour.

**2** Understand your camera and gear. Great photos can be taken on any device, you don't need a fancy camera. If shooting on your smartphone, check if you can shoot in RAW or DNG files for better post processing. Avoid using digital zoom if there is no built-in optical zoom, you can zoom/crop later. Be familiar with your gear, it should be an extension of your hand.

**3** Always have a plan when going out shooting the weather. Depending on what you are shooting, understand the conditions and have a way out planned. Avoid getting caught out by unexpected weather conditions. The best picture is not worth getting hurt for.



Morning view of smoking volcanoes in East Java, Indonesia  
Samsung ZFlip 4



Circular Rainbow at Seattle-Tacoma International Airport

## Circular Rainbow by Peter Reinold, Kent United States 3rd Place, Standard Chartered Smartphone Weather Photographer of the Year

Instagram: @peter\_reinold

Photographer Peter Reinold held his camera phone steady through a turbulent landing at Seattle-Tacoma International Airport to capture this complete circular rainbow. He said, 'I always pick the window seat on planes, as you never know what you [might] encounter. It paid off this time.'

A rainbow's shape is actually a circle centred on the point directly opposite the sun from you, but most of the time we can't see the full circle because the ground gets in the way. If you can get to a higher vantage point with water droplets below, you are more likely to see the complete rainbow. While a plane is an obvious location, sometimes you can also see circular rainbows from the top of tall buildings.

**Rowing by Gerson Turelly, Brazil**  
**Winner, Standard Chartered Climate Award 2024**

Instagram: @turellystreetphoto and @gersonturelly

Captured by local photographer Gerson Turelly, this image shows the centre of Porto Alegre, Brazil, during the devastating Rio Grande do Sul floods in Spring 2024. In this image, a road has turned into a waterway down which a young man paddles his kayak. Gerson notes that the kayaker was headed towards the worst affected areas to help rescue stranded people.

The composition and lighting of the photo were praised by the judging panel, as well as the powerful combination of weather and climate impacts portrayed in the scene. Judges commented how the picture shows 'past, present and future'; flooding has always been something that we must deal with and adapt to, however as climate change increases the intensity of heavy rainfall, flooding will become even more common.

Looking at the most intense ten-day period during this event, World Weather Attribution showed that climate change made the flooding at least twice as likely, and six to nine per cent more intense. The El Niño Southern Oscillation was also shown to play a large role in increasing the likelihood and intensity of this event, demonstrating how natural variability of the ocean and atmosphere can combine with climate change to produce particularly extreme events.

Until this event, Porto Alegre had generally



A flooded Porto Alegre  
 Canon EOS 6D, 50mm

been spared from significant flooding, meaning that maintenance of its flood defences had been neglected. Urban sprawl into flood-prone areas had also increased vulnerability. This event acts as a reminder that, under climate change, extreme events will occur in new places or with greater intensity or higher frequency than before.

**GERSON'S TOP TIPS**

1 Photographing a scene that has to do with the weather will always be challenging. In most cases, there will be some difficult technical issues to resolve.

2 Cultivate patience to wait for the right moment to take the photo as well as train your reflexes to be able to respond immediately to a scene that will only last a few moments.

3 Study the climate, its general concepts and current news related to it as well as its rarer phenomena. This way, you will understand and know how to properly value an important climactic scene when you are in front of it, composing a good photo and telling a good story.

**Rain Aria by Angelina Widmann, Bregenz, Austria**  
**The Standard Chartered Young Weather Photographer of the Year 2024**

Instagram: @angewidmann\_

Young photographer Angelina Widmann captured this stunning shot during an open-air performance of *Madame Butterfly* on the eastern shore of Bodensee (also known as Lake Constance) in Bregenz, Austria. Angelina noted how 'the rain made the plot even more dramatic'. This photo was taken with a telephoto lens due to the distance between Angelina and the stage. She used a short exposure to capture the falling drops, before sprinting to safety to avoid damaging her camera!

Bregenz is one of the wettest spots around Bodensee, due to its proximity

to the mountains, receiving over 1600mm of rainfall per year. Perhaps this explains why the opera singers bravely continued their performances, even as the audience fled the arena in the sudden downpour! In the summer, monthly rainfall amounts can reach 200mm in Bregenz, most likely associated with summertime convection enhanced by moist air from the lake being lifted by the mountainous terrain.

As the atmosphere warms due to greenhouse gas emissions, the amount of water vapour in the air also increases. Additional water vapour means that when it rains, it pours. A change to more intense rainfall has already been observed in Europe and across the world. Although infrequent, such downpours can disrupt leisure activities, as well as transport, infrastructure and industry, so accurate forecasting of extreme rainfall will become increasingly important as our climate changes.



Panoramic image of Cuckmere Valley in East Sussex  
 DJI Mini 2

**Saturated Earth and Sky's Promise by Ellis Skelton, Eastbourne, UK**  
**2nd Place, The Standard Chartered Young Weather Photographer of the Year 2024**

Instagram: @ellis\_skelton\_photography

Young photographer Ellis Skelton eloquently describes his panoramic image of Cuckmere Valley in East Sussex: 'The expansive horizon of the river Cuckmere spans across the picturesque landscape and

the harmonious blend of earth and sky merge capturing natural tranquillity and wonder within the landscape. Captured from above, this breathtaking panorama shows how powerful the weather can be.'

The judging panel noted how the photograph seems to contain two seasons: summer on the left and autumn on the right. The beauty of the sky contrasted with the flooding on the ground is a reminder of both the wonder and misery the sky can bring.

Sea levels are predicted to rise along the Sussex coastline, potentially by over a metre by the end of this century. And as the

Cuckmere River flows into the English Channel, those sea-level rises increase the likelihood of flooding in the Cuckmere Valley.

The flood risk increases further thanks to changing river management techniques over the course of several centuries which have led to a build-up of shingle at the river mouth. There are fears that flooding could become the norm even sooner, as a Coastal Risk Screening Tool by Climate Central suggests that the annual flood level will cover most of the Cuckmere Valley by 2030.



A thunderstorm rolling in, Austin, Texas  
 DJI Mini 2

**Fire and Ice by Lincoln Wheelwright, Austin, Texas, United States**  
**3rd Place, Standard Chartered Young Weather Photographer of the Year 2024**

As a thunderstorm began rolling in, young photographer Lincoln Wheelwright grabbed his camera and took this picture from his house in Austin, Texas. The judging panel were particularly impressed with the

split colours: the blue to the left of the cloud and the orange to the right. Lincoln explains how 'the clouds were low enough that they blocked the light on the other side. This gave the effect of the fiery sunset versus the cold sky.'

Thunderstorms frequently strike late afternoon or early evening, as it tends to be the warmest and most humid time of day. Warm and moist air at the surface creates an unstable atmosphere, forming a deep cumulonimbus or thundercloud once air starts to rise. In some cases, the atmosphere

becomes so unstable that the air rises without an outside trigger, but sometimes air lifted over a mountain or over a cooler, denser air mass triggers the storm.

Texas has an abundant supply of warm, moist air, thanks to the warm waters of the Gulf of Mexico to the south. The Gulf of Mexico is warming rapidly due to climate change, boosting the supply of moist air and raising the potential of intense storms in the region.



An open-air performance of Madame Butterfly on the eastern shore of Bodensee  
 Nikon Z6, 200-500mm