Final Competition: What is the power of a volcano?

A volcano's power can be viewed in many perspectives. Power alone is not just the strength of something but also the effects it has on us, as humans, and the environment.
One could say that volcanoes are an inevitable part of a planet or a moon's existence as they appear in many of the pasts of planetary objects. Volcanoes can change a whole world's climate over time and there are many ways in which this happens.

Currently, there are 1500 active volcanoes on our planet Earth. Any of these could create large-scale or small-scale catastrophic changes to the surrounding areas- Ecosystems buried by volcanic ash and suffocated by pyroclastic flow. The explosion, the burial due to ash and the cooling of lava have terraforming effects. These are already very powerful consequences in a single volcanic eruption. Powerful consequences can be looked as positive or negative outcomes; many people believe they have negative impacts on both the environment and on society. On the other hand, there are also examples of good outcomes from a volcanic eruption.
An example of a positive outcome from an eruption of a super volcano is Yellowstone National Park in the United States. This park is the product of the eruption of the super volcano that is currently in a dormant state. Due to the minerals in the volcanic ash, the soil became very fertile and created a luscious park. The caldera (where the rupture lies) collected water over generations and brought back life into this potentially dangerous piece of land.
One volcano, alternatively, also has the power of changing the global climate temporarily or permanently. The solids, toxic gases and high-altitude aerosols

spewed out can travel the globe through the atmosphere creating global temperature variations as there are changes in solar radiation reaching the Earth's surface.
When Mount Pinatubo erupted in 1991, it blasted 20 million tonnes of SO2 and ash more than 12 miles into the atmosphere which travelled globally for 3 weeks. This lowered the global temperature by 0.6 degrees C over the next 15 months. This is a negative product of a volcanic eruption as global temperature changes are one of the causes of climate change.
Clearly, not only does the power of an eruption affect the local areas but also globally.

As volcanoes have been on Earth before humans have, they would affect our society majorly based on the force they have.
Religion is a chief part of the social-cultural part of our society. Volcanoes play a role in religion as it is believed natural disasters are sent by the god(s) as a punishment to us. A famous example of volcanoes being part of a culture is in Ancient Rome. They believed in one of the gods called Vulcan- god of fire. The eruption of Vesuvius in the Gulf of Naples (79 AD) fascinated and scared human society until the present. Today, Pompeii is still a popular location for tourists to admire the power of Mount Vesuvius.

A vital part of human society is its history in art. Two famous artists of the 1800s had been influenced by a volcano's after effects. For example, Munch's painting of The Scream (1893) was inspired by the "blood red sunset". This sunset was the result of the eruption in the Krakatoa islands. Scientists say it could have affected the colour of sunsets for over a year.
Katsushika Hokusai's renowned block prints are inspired by a volcano- "Thirty six views of Mount Fuji."
These celebrated works of art have shaped humans' view on the world and are a reminder of these magnificent cracks on the Earth.

One of the humans' way of survival is farming and in many volcanic areas, people benefit from the fertile soil in the perimeter of the volcano. Although volcanoes bring destruction, they also bring organic life and serve as a great source for our food. Unfortunately, many of the countries that have volcanic areas are not financially prepared to protect and plan for an eruption. The farmers living close to volcanoes are risking their lives.

There are also more specific ways of measuring the power of a volcano by scientifically looking at all aspects of volcanoes.
The most known way of measuring volcanic eruptions are seismometers and seismographs. These record and measure the movement of earth which can also be used for earthquakes (another result of an eruption, as well as tsunamis.)
Luckily, we can look at the difference in power of volcanoes due to VEI (volcanic explosivity index) as it has records of the explosive history of other volcanic eruptions.
Ground deformation, which is a large impact from eruptions, are measured by EDM (electronic distance meter) and tilt of the earth.
Scientifically, this is an easy way of measuring a natural disaster's power as well as a prospect on future and past eruptions. This contributes to the massive strength, force and might of volcanoes.

In summary, humans have always been fascinated by such awesome power coming from the very depths of the Earth. These have changed the Earth's aspect and have also helped shape human society to this day as well as into the future. The many perspectives of what one volcano can do to a world can tell us the power of a volcano.