

SMAP NEWSLETTER

First Quarter, 2023

Salt Manufacturers Association of Pakistan's Quarterly Newsletter



GI Tag meeting between SMAP, PMDC, MOC, GI Cell, GSP and IPO Pakistan

SALT MANUFACTURERS ASSOCIATION OF PAKISTAN is a non profit organization instituted to represent and protect the rights and forward fair demands of salt manufacturing community through global representation.

Inside This Issue

Chairman's Message Page 2 The Salt Restaurant Page 3 Salt for Migraines Page 4 Salt Shampoos Page 5 Salt Solution - Prolong the Iife of Fresh Flowers Page 6 Romanian Salt Mine turned Amusement Park Page 7 Bath Salts Page 8 Himalayan Salt Soap Bars Page 10 Turkish Pink Lake - Producer of Salt Page 11 Sel Gris - French Grey Sea Salt Page 12 Salt Water used to produce Electricity Page 13 Amazing views of Salt Fields in Vietnam Page 14 Epsom Salt Bath Page 16

Chairman's Message

Pink Himalayan Salt gained popularity in late 2000s and was thought to be extracted from the Himalayas but in actual it is mined 186 miles away in Pakistan in the Punjab region. I suggest a better way to address the exact location is that it is mined from the "Foothills of the Great Himalayas".

The Salt mine in Pakistan is the second largest salt mine in the world. The pink salt comes from remnants of ancient seabed that crystallized 600 million years ago. Legend has it, it was actually Alexander the Great's horse that first discovered the salt rocks when it stopped to take a lick. Then, under British rule, salt mining ramped up in the 1870s.



Since the partition Pakistan was benefitting very little profit and credit for a product that was mined in here locally. Similar event had happened in the past with Basmati rice where India was capturing all of the export market for a commodity that was grown and cultivated in Pakistan. It was then in 2019 when Pakistan was fighting a case in the European Union against India's move to get basmati rice registered it as its product, SMAP pushed the government to register Pink Himalayan Salt for a Geological Indicator Tag in order to discourage other countries from misusing our commodity and generating revenue. The Advisor to Prime Minister on Commerce and Investment, Mr. Abdul Razzak Dawood not only listened but understood the significance of the matter and took the initiative of giving the G.I. tag to Pink Rock Salt and label it as "Made in Pakistan". Adding the GI tag motivated and encouraged salt manufacturers and exporters to expand their business at a global scale.

The Tag has caused an immense stir in the salt industry, but the government should realize that its complete benefits will only be seen in five to ten years from now when our local manufacturers and exporters will be recognized globally through their export products but as for now, I am happy to say that Pakistan has got the ownership of its product after an extensive struggle. Thanks to the efforts of the Government of Pakistan that the Pink Salt will not have to go through the same ordeal as Basmati did.

To ease up the process Salt Manufacturers Association of Pakistan is guiding all members to get registered in order to utilize the trademark. The association is also working tirelessly to increase the awareness of pink salt consumption benefits. The natural salt contains 84 different minerals along with Sodium Chloride such as magnesium, iron, iodine, and calcium which provide a complete nutritional package. Himalayan salt is also said to have healing properties for asthmatic patients and once the true awareness of pink salt is set among the communities at large, I am certain that the price of Himalayan salt will earn valuable foreign exchange for the country which is very badly in need of Dollars in these difficult times.

We strongly recommend that every company associated with the trade of Salt should immediately get registered, this way the salt community will grow stronger together with more product variations and larger market share globally.

The Salt Restaurant

In Southern Iran a new restaurant by the name of Salt Restaurant has been opened. The unique design of the restaurant justifies its name, everything in this salt is made out of salt the walls, flooring, bars even the chairs and tables. This restaurant is really a sight to behold, its unusual infrastructure makes it is a popular attraction not only amongst the locals but tourists as well.

Inspired by salt caves, the architects of the eatery in southern Iran claim their building material cleanses the two-story bistro of cooking smells and creates positive ions in the atmosphere. Designed by the Iranian Emtiaz Designing Group, it is reported that the choice of salt as the main material in the restaurant was used to promote the concept of green construction. The firm decided to use salt in powder and rock form which is environmentally sustainable and affordable. The walls and structural sculptures are made out of salt sourced from the salt mines and Salt Lake of Shiraz mixed with natural gum to harden.

The project kicked off with detailed study and research to look for the right kind of salt and materials. Situated on 150sq. Meters of land, this eatery has been inspired by the looks of salt caves and was designed to give the same texture in its interior. The end result is environmentfriendly, sustainable and quite amazing. The team handcrafted the tables from rock salt while recycled soft drink cans were used for preparing the surface of the stairs and chair frames.

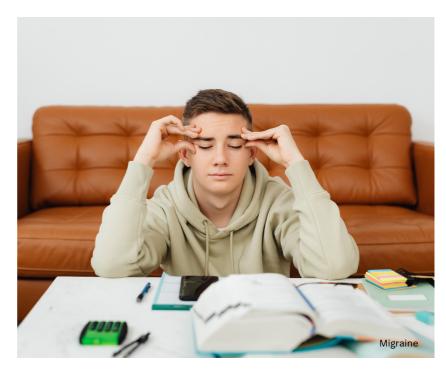
The owner also quotes "Salt releases ions which also purify and filter the air; most people are unaware of its astonishing healing powers. Even Hippocrates used to recommend salt water inhalation therapy for lung diseases." When one eats at this restaurant, they don't only enjoy the scrumptious food but also the salt therapy.

The owner says "Salt is a natural disinfectant."



Salt for Migraines

Migraines are throbbing headaches in one side of the head that last for hours, it is a leading disabling condition worldwide, second to backpains. Migraines caused on a hot day or after vigorous exercise are due to dehydration, they can easily be cured by salt intake. Low sodium levels in such cases can create electrolyte imbalances and affect the nerves which bring forward migraines, in severe cases can also be the reason for nausea, vomiting and dizziness. In such cases having table salt or preferably Himalayan salt dissolved in water is preferred. This can bring balance to the electrolyte level and provide relief.



The Harrington Medical Research Institute conducted a survey in USA, which kept a check on the 24hour dietary consumption of thousands of Americans and whether they got a severe migraine or headache during that period of time. Of 8819 adults surveyed exhibited that those with the highest levels of sodium or salt in their diets had fewer headaches and migraines. Severe migraines are a side effect common in people going through salt withdrawals. Another study in 2016 suggested that "The chances of one getting a migraine severely decreased with their increased sodium intake. An optimal amount of salt in one's diet is highly beneficial for them to avoid migraines."

Himalayan sea salt especially can ease migraines and its side effects. It differs from regular table salt because of its purity and mineral content. Being especially rich in calcium, magnesium, potassium, sodium, and other minerals is a notable advantage of Himalayan salt. If dehydration is a factor in the development of your migraine episodes, then the simple trick of preparing a mixture of fresh water, Himalayan Sea salt crystals, and fresh lemon juice may help you to feel better.

5 | SMAP Newsletter | First Quarter, 2023

Salt Shampoos

Over the summers, we see a surge in salt infused products such as scrubs, bath salts and hair sprays. A popular that is popping up are salt shampoos. The concept of adding salt to our shampoos seems a bit odd, but in action this ingenious product adds texture to our hair simultaneously giving it volume rather than leaving it stripped. Sea salt shampoos specifically are very good for our hair, packed with various minerals like magnesium and potassium that gives the hair a smooth and soft texture with minimal effort.



Salt Shampoos are naturally good for detoxifying the scalp of grease, grime and dirt. The health of our hair starts with the scalp, exfoliating our scalp consistently is key for keeping our skin and scalp nourishing. Salts are organic, they aid in cleansing the hair without stripping the hair or damaging the scalp. They also act like a natural oil absorber and soak up all the access oil in our hair which makes the hair seem greasy and unwashed. Additionally, salt shampoos also gently exfoliate the scalp, the course consistency of the salt aids in sloughing away all the dead cells, dirt and product build up which is damaging our hair.

A dip in the ocean can leaves our hair tousled and texturized, salt shampoos have a similar effect. Fine, flat hair benefit the most from the volume and texture given by salt shampoos. The salt opens the cuticles giving the hair a more soft and smooth touch, whilst making it seem thicker. Sea salt is another form of salt that increases blood circulation in turn boosting one's hair growth. The various minerals present in sea salt – calcium, zinc, magnesium, bromide, sulphur and sodium chloride – combine together to give us our desired hair which has a better volume, thickness, texture and less grease.

They help remove chemical residues left on the scalp, which can cause itchiness after a coloring treatment. More commonly, they also help to rebalance and soothe greasy, irritated scalps. Salt shampoos are an innovative product that brings forth the desired result required by us.



When we usually purchase flowers from a florist, they come with a little packet of nutrients containing of sugar, citric acid and additives which encourage the flowers to take up more water causing them to last longer. You can achieve the same effect by simply mixing salt and water.

Since ancient times, salt has been famous for its anti-bacterial properties, salt water has been used since Roman times to preserve foods through pickling. Salt water kills bacteria with the help of osmosis pressure. When a bacterium enters the saline solution of the plant, the salts present in the bacterium migrate out of it due to the concentration differences between the solution and the bacterium, which in turn causes it to dehydrate and struggle to survive. The stems of the flower are like a straw, water is drawn from the soil and is used to feed the top part. A plant that is dehydrated will absorb water through the stem much more guickly than one that has sufficient water. Because of this, alternating filling your vase with a saline solution and fresh water will cause the plant to take in more fresh water

Adding salt water to soft water is very beneficial for plant because of the presence of various minerals present in salt. The saline solution contains potassium, a nutrient that is known in fertilizers as "potash". Moreover, two major ingredients in Epsom salts are magnesium and sulfur which are primary nutrients that help in the production of chlorophyll– a central part of photosynthesis. Sulfur assists in making nitrogen and phosphorus whilst magnesium helps in the absorption of these nutrients by the plants. Salt Solution - Prolong the life of Fresh Flowers



It is important to note the optimal amount of saline solution to be used, adding too little will make the mixture ineffective while adding too much can be harmful. Homemade preserves can also be effective if one follows the recipe and uses the appropriate quantities.

Romanian Salt Mine Turned Amusement Park

Salina Turda is said to be one of the most historic salt mines in Europe. Considered to be one of the world's most spectacular underground formation shaped by people. It is located in Transylvania, a few miles away from Cluj, thought to be one of the most memorable places in Romania. The Turda salt deposits date back to ancient times and was mined to about 30 meters deep, leaving tunnels that were used as anti-aircraft shelter during war. It was then transformed into a tourist attraction and a museum. The mine has very recently been converted into a majestic and extremely popular amusement park - a magical place immersed in a natural habitat of incomparable beauty.

Today, it spans over 27 square mile area, it is approximately 120 meters deep in a chasm enclosed by dark salt walls. The salt mines have a huge Muesum of Contemporary Arts, an amphitheater with 180 seats. Moreover, the Turda salt mines also house a Ferris wheel, bowling alley, billiards and spa for respiratory treatments. There are also mini golf courses and ping pong courts. It is easy to get distracted by the mesmerizing view of the rugged cavern of the salt mine itself due to 3 billion tons of salt being mined.

The mine is made to maintain a constant temperature and a humidity of approximately 80%. There is also a small underground lake that can be navigated with the aid small boats provided at the park. Various levels of the salt mine are visited by the ancient elevators that were once used to mine salt. With its vast history the Turda salt mine is not only a huge museum but also an epic tourist attraction. The innovative and unusual looks of this amusement park look like something right out of a science fiction novel. It definitely is one of the most beautiful places "IN" the earth.



Bath Salts

Bath Salts are water soluble minerals composed of Epsom salt, sea salt, sodium chloride and various other minerals which are reduced to fine particles that are then mixed in warm bath water. Not only do they reduce stress but also relieve aches and body pains. After a long, tiring day at work, there is nothing more relaxing than soaking yourself in water consisting of these little crystals. Fragrances are frequently addedates bath salts to aid in stimulating the nerves and to make them more appealing.

Greek physician, Hippocrates encouraged people to bathe in sea water regularly to heal numerous ailments. Bath salts are used to detoxify and cleanse the body. They are known to treat muscle pains, aching joints, headaches etc. Moreover, bath salts also ease stress, anxiety and various skin conditions namely eczema. A detox bath contains Epsom bath salts along with regular salt, the minerals present in it assists in improving our health, weight loss and treats constipation. Adding a few drops of essential oils in such baths can offer aromatherapy by relaxation and improved moods.



The National Eczema Association suggests adding bath salts to baths will help reduce skin inflammation and irritation. Moreover, the Arthritis Foundation also recommends soaking in bath salt water to relieve stiff joints and muscle soreness after exercising. Soaking your foot in such water can also treat toenail fungus, eradicate foot odor. There are various different types of bath salts.

1. Himalayan Bath Salts:

The oldest and most popular bath salt is this one, easily available at almost every part of the world. It is composed of 84 significant minerals which gives them a pretty pink shade making them highly alluring.

2. Coarse Bath Salts:

These are large grain bath salts each grain being approximately 2.3mm in size. They are ideal to add to bath water to dissolve them in it and are a great addition to therapeutic bath salts.

3. Dead Sea Bath Salts:

These bath salts are a different as compared to regular bath salts. They have a high concentration of magnesium, sulfates and potassium. The high mineral percentage is useful in detoxifying the skin. It's popular in reducing muscle aches and skin irritations.

4. Fine Bath Salts:

These are fine grained bath salts that sometimes have a grain size that is similar to pulverized table salt. Its fine consistency supports it in blending with herbs and other bath blends. Fine bath salts are known to be more pleasant on sensitive skin types.

There are many other types of bath salts present. Organic bath salts, grey bath salt etc. Bath salt are relaxing and known for its cosmetic as well as medicinal benefits. Consult a doctor or skin specialist to find out the bath salt most suitable for your skin type. Whether one is pursuing to have softer skin, detoxifying or just a simple good night's sleep - bath salts are practical and convenient in playing a significant role in our daily self-care routines.



Make Your Own Bath Salts At Home

- Firstly, in a large bowl mix 6 parts of coarse salt and 3 parts Epsom salts.
- Add 1 part baking soda to soften the skin.
- Add a few drops of essential oils and also mix in your favourite fragrance.
- Add a few drops of food colouring if required (optional).
- Finally store them in a stoppered container to keep out moisture.

Himalayan Salt Soap Bars

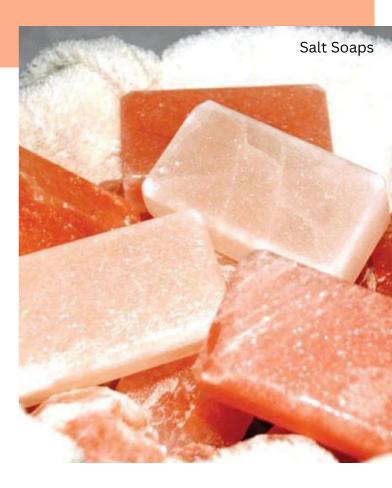
Himalayan salt is not only good for consumption but also for the skin, its countless benefits make it popular product amongst the public. The revitalizing and calming effects of Himalayan Salt are easily accessible now in the form of Himalayan salt soap bars. This salt scrub soap makes the bathe time an experience worth remembering. Whether it's after a long hard day of work or stiff muscles, a shower with this innovative product helps in distressing, cleansing and exfoliating the body. As pink salt is rich in mineral content, it also strengthens the muscles simultaneously making the skin soft and supple.

Made with pure Himalayan salt, these soap bars consist of 84 trace minerals. The naturally occurring salt crystals found at the foot of Himalayas are incredibly nourishing, the minerals found in them purifies the skin. Additionally, they re-mineralize the skin, balancing its pH levels leaving a soft and smooth feeling all day long. The salt granules gently exfoliate the skin - a towel, warm water and the soap bar are enough to get out the dirt and grime stuck to your skin. The pink salt might work on healing rough and dry skin and stimulating circulation giving you well-moisturized skin.

The Himalayan salt bath soap will give you a spa treatment right at your home if you are looking for a quick and easy way to pamper your skin while

a quick and easy way to pamper your skin while you shower. Warm the bar directly in the oven at 300 degrees for 2 to 3 minutes. Once, warm pour your favorite body oil on the pink salt bar and use a towel to massage your body with it for an instant refreshing feel. It is ideal for days when one needs to sit back and simply unwind. This amazing ingredient is also known to improve moisture, elasticity and softness, and may even reduce the appearance of fine lines and cellulite.

With regular use, Himalayan salt soap bars will help treat and manage skin problems. Pure mineral salts deeply cleanse pores, nurtures skin, and restores a healthy balance to unhealthy skin. They eliminate itching and irritation while moisturizing skin. Even more, they help reduce redness and inflammation caused by dry skin and chronic skin disorders. Those with problematic skin will enjoy the many wonderful benefits of these luxurious scrubby bar.



Turkish Pink Lake -Producer of Salt

Lake Tuz also known as "Salt Lake" is the second largest lake in Turkey with a surface area of about 1665 km2 and one of the largest hyper salines (which contains large concentrations of sodium chloride). The lake found in the central plateau of Turkey is fed by two major streams as well as groundwater and surface water. For the most of the year it is very shallow, about 1.6 feet. This lake acquired its color due to an alga (an aquatic non-flowering plant) and bacteria boom and rising temperatures. The algae produce a red-orange pigment called beta-carotene when the temperature increases. This in turn changes the color of the lake to red or pink.

The Salt Lake, is located in the middle of the tectonic zones, and is known for its rich mineral structure. It is estimated that approximately 250 million tons of reserves are available. This lake, has been producing salt since the early 1800's. This unique lake is homing many different species of birds, it has about 6000 nesting sites. It is considered to be one of the most natural areas of the world and has been listed in the UNESCO World Heritage Temporary List because of its unusual look and features.

During winters, the salt is dissolved in the fresh water that is introduced to the lake from the precipitation and surface runoff. This mechanism is used as a basis for the process of salt mines. The three mines operating in this Lake produce 63% of Turkey's consumption needs and generating industrial activity around these mines related to processing and refining salt. For about three months every year, the country's salt producers flock to the lake's dry areas to extract salt from deposits. The lake is a major resource of salt for the country. The salt, with a purity rate of 99%, is also exported to more than 60 countries.



Sel Gris – French Grey Sea Salt

Sel Gris literally translates to "Grey Salt"- it is a coarse-grained salt that is popularized by French people. Being harvested in Brittany, France, grey sea salt comes from salt evaporation similar to Fleur de Sel but is collected differently. Sel Gris is hand harvested with an ingenious extraction method that follows a 2000 years old Celtic technique, which involves the evaporation and collection of seawater in salt pans, it is raked to the bottom of the salt pan and is collected with special wooden tools. Grey salt is known for its higher than usual moisture content and for its unique grey color.



Being coarser than Fleur de Sel, it is a moist salt typically having 13% of residual moisture. There are various minerals in this unique salt namely sodium, calcium, potassium, magnesium, iron, manganese etc. It is the perfect everyday salt for seasoning as it adds full, rich flavor to all foods. Use the fine grain in cooking or as a finishing salt. Moreover, you can use the course salt as a finishing salt for added crunch. This salt is a favorite of top chefs in France and around the world for its incredible flavor.

French grey sea salt has so many amazing healing benefits because it helps to balance out the minerals in the human body. It gets rids of excessive mucus produced by the body, preventing difficulties in breathing and swallowing. It also regulates the blood pressure and blood sugar, in turn improving our heart health. Furthermore, this salt extracts excess acidity and toxins from the body such as aluminum which is very damaging for the body. The removal of excess acidity is achieved with the aid of this salt maintaining a balanced acid-alkaline level in the body. Over and above that, this salt improves adrenal health, the respiratory system, calms the nervous system and boosts the immunity to health to diseases and infections. The benefits are endless!

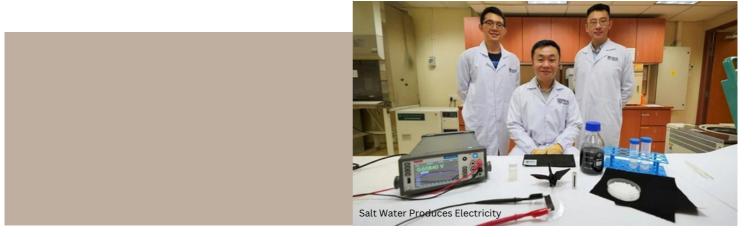
Salt Water Used to Produce Electricity

Researchers at Stanford, California have developed a rechargeable battery that uses fresh water and salt water to create electricity. Aided by nanotechnology, this battery makes use of the salinity difference between salt water and fresh water to generate a current. A research team led by an associate professor Mr. Yi Cui at Stanford carried out these experiments. The professors team estimated that if all the world's rivers were put to use, there batteries could supply about roughly 13% of the world's current energy consumption.

The battery itself is simple- consisting of two electrodes- one positive and one negative, which will be immersed in water containing ions. These ions will be of sodium and chloride- the components of ordinary table salt. Initially the battery is filled with fresh water, which is than drained and replaced with salt water. Due to the salinity of salt water, it contains 60 to 100 times more ions as compared to fresh water. This increases the electrical potential or voltage between the two electrodes. Which makes it possible to reap far more electricity than the amount used to charge the battery. Once the discharge is completed then the sea water is drained and replaced with fresh water to restart the cycle.

In the beginning the battery had an efficiency of 74%, easily converting the potential energy into electric current. Mr. Cui believes that with simple modifications the battery could have an efficiency of about 85%. Other researchers have also made use of the salinity difference between salt water and fresh water to produce electricity but that process requires the presence of a membrane through which the ions can move. These membranes tend to be very fragile, hence were not adequate enough to generate electricity. In comparison, Cui's method is by far superior.

His group did an estimate for various regions and countries and determined that South America, with the Amazon River draining a large part of the continent, has the most potential. Africa also has an abundance of rivers, as do Canada, the United States and India. The professor states that "The fresh water doesn't have to be necessarily clean; storm run-offs and gray water can also be used. My team is right now studying if sewage water can a potential replacement for the fresh water. If we can use waste water then this battery could be game changer".



Amazing Views of Salt Fields in Vietnam



Vietnam is a country famous for its white, sandy beaches, tropical climates and salt fields. The stunning view of the salt fields at sunrise or sunset are definitely worth the visit. A salt field is low and flat of land whose purpose is to harvest salt from the sea or other artificial salt reserves. After the water is completely evaporated, one can see piles of salt on the plots, creating a beautiful sight of the fields.

The country has approximately 21 salt producing provinces. Ninh Thuan is the largest quantity in salt production and others such as Nghe An, Thanh Noa, Boa Thuan also plays a vital role in the salt industry of Vietnam. One may catch the view of the salt workers at dawn or even late in the evening. Salt making is frequent in dry season, from March to May. What's more the workers start their days at the fields at 4am and end at 9pm. The fields bring an artistic inspiration for photographers. The yellowish crimson color of the sunrise or sunset, the image of the salt reflected in sea water make the fields super appealing and staggering.

During the months of December and May, these salt fields are an extremely popular tourist spot, bustling with people and their sounds. The fields are voted as among the best places for sunsets in the world. Some of the most remarkable salt fields are:

1.Han Khoi Salt Field:

Located in the Ninh Hai province, the ideal time to visit this salt field is from January to June which is the high season of salt production for in the Khanh Hoa province. In addition to a spectacular view, one can visit the Ninh Trang city which is just an hour of drive away.





2. Ca Na Salt Field:

The salt field along the Ca Na beach which is 30km to South of Phan Rang City, Ninh Hoa. The large field with wind and sunlight will make you fall in love with the life there. The lifestyle and architecture of the Cham culture can also be viewed over there.

3.Phuong Cuu Salt Field:

You can visit this salt field between December and May when it comes to the salt making time. For the best journey, one should discover the salt making process and get immersed in the breathtaking view at dawn.



Epsom Salt Bath

Epsom salt is one of many naturally occurring mineral salts, a compound of magnesium and sulfate in rock-like formations. The name "Epsom salt" is a nod to the town of Epsom, located a stone's throw away from London in England, where the salt was supposedly discovered about 400 years ago.

Epsom salt helps stabilize mood anxiety and depression



While it resembles table salt, it has a very bitter taste and isn't really meant to be consumed. Most users dissolve it in a warm bath for a soak with the hope of relieving stress or sore muscles.

When you pour Epsom salt into warm water, it dissolves the magnesium and sulfate and allows it to be absorbed into your body through your skin. Centuries of user testimonials claim wonderful benefits from using Epsom salt this way.



The SMAP Newsletter is published quarterly by the Salt Manufacturers Association of Pakistan and distributed free of charge by individual mailing. The Newsletter is distributed to email subscribers and appears on the SMAP website (www.smap.org.pk).

The Newsletter welcomes feedback, new information, and relevant articles on all aspects on salt industry.

Address: Office# 401, Building No 34/C, Lane 12, Bukhari Commercial Area, D.H.A Karachi,75500,Pakistan. Email: info@smap.org.pk Telephone: (+92)-21-35156011