WHEERING.

July 2016 . # St. 55 # 11



The Indian Monsoon

Monsoon, the magnanimous

And the rains came

It's raining snocks!

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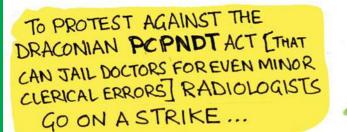


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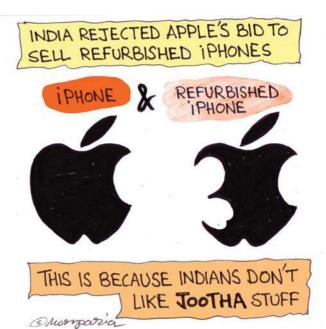
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MORPARIA'S PAGE







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Sri Mata Amrita Devi



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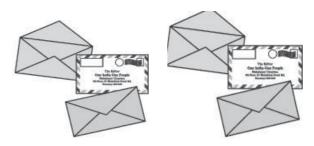
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_ETTERS TO THE EDITOR

"Alarming"

The number of people who die in police custody in India is alarming (Police Reforms, One India One People, June 2016). The recurrence of deaths on account of custodial violence can be attributed to the fact that action is rarely taken against the guilty policemen. The police force is supposed to uphold the law; instead it routinely misuses its powers. The government must give this matter some serious thought. It should consult the law commission and the National Human Rights Commission, and bring in appropriate amendments in order to curb custodial crimes and ensure that the culprits are punished.

The police have lost their mental capabilities when it comes to arresting innocent citizens. Just to solve a crime, when they cannot arrest the actual culprit, they look for soft objects to frame them. There are also good and honest policemen in our country, but I'm referring to those dirty pigs that hide behind a police uniform. A day is not far when the public will punish the police for their wrongful actions. If a hundred people gather outside a police station for justice, then just see how the tables turn. But who will dare against



these goondas in uniform?

– Jubel D'Cruz, Mumbai

"Quite impressed"

I saw your June issue (Police Reforms) and was quite impressed by the magazine. Your choice of topics is noteworthy. The issue you have dealt with - Police Reforms is a very relevant one. We all speak about it, but nothing ever is done about it. Hope the reforms are finally implemented. As citizens, we too need to take some matters in our own hands, like, for instance, saying no to bribes, even petty bribes which we sometimes rationalize as ok. I also liked your colour section. The travel feature on Madhya Pradesh was an eye-opener I must say! I look forward to reading more of your magazine in the future too. Keep it up!

– Amit Gupta, Mumbai



-etters should be addressed to

SATIRE

Whither the showers?

V. Gangadhar talks about the pleasures and travails of the rains, when it rains, that is!

HIS is my 40th year in Mumbai. The monsoon clouds already arrived and departed without emptying their contents. It did rain in fits and starts. But we did know the rain received would not be adequate till the next rainy season. Enough warnings were issued in the media, the skies threatened, the clouds darkened, thunder rumbled, but as June, July and September arrived and disappeared

last year, we were still looking up at the sky. The more religious among us joined in the *yagnas* to please the rain gods, but in keeping with modern trends, they failed to oblige us.

This year too, days came and went. I expected a lot from June, but it fizzled out. No rains. I followed TV weather forecasts from the world over. Ha, my faith began to shake. It rained in Chad (where the hell is that?) and Outer Mongolia, but so far, a few drops of rain fell in Mumbai and the rest of



while we were at school. 'The Hindu' was our daily staple diet for information and we played the temperature game from there, what a thrill to note down that Rentachintala often topped list of maximum temperatures closely beating Kurnool and the rest. We never visited these places, but the temperatures noting game provided our morning thrills for many years. It continued when both of us settled down in Mumbai, but the habit of

checking the temperatures continued. Normally, Kandivili went ahead in maximum temperature and also heavier rainfall, which gave me endless delight. By the time the rainfall ended in early October, the suburbs were clearly ahead.

Remember that late July heavy rainfall day, when life stopped in Mumbai? It was with great difficulty I travelled from Khalsa college, to Bandra, Matunga, braving the cloudburst. It was an experience I will not forget in a hurry, and the consolation

Western India. Mind you, nearly 18 months gone and not a sign of the monsoon!

The absence of rains has never deterred me and my elder sister from playing our own, originally invented weather games. She lives in South Mumbai. Every morning after receiving the morning paper, we compare notes on the temperatures in South Mumbai and the suburbs. For instance, it could be 34 degrees Celsius at Kemp's Corner and 31 degrees Celsius at Kandivili, which meant she had won. We note this down and file the information for the subsequent days, till the month is over and the averages checked.

This was not a new game, but it started several years

was that the suburbs clearly thrashed the city. My Kemp's Corner sister could not believe it had rained so much in the suburbs, and so little in the city. It was a day of triumph for the humble suburbanites who soundly thrashed the city slickers. How did I reach home? Partly by bus, partly by cab,



then walked a bit, fell into a ditch, but always holding my head high; here was a hero who had out walked and outmaneuvered the city slickers.

In the years to come this would be the heroic story I shall tell my grandchildren.

The writer is a well-known satirist.

Monsoon, the magnanimous

The complex set of wind and weather factors which drive our monsoons, were known to the ancient world, says **Akul Tripathi**, giving examples from literature and culture. And despite the advent of technology and our attempt at accurately predicting it, the vagaries of monsoons remain as consistent as in days gone by, he marvels.

"When, O Wanderer at will, you see her in the lap of the mountain as if in that of a lover, her shawl the Ganga slipping off, you will not fail to recognise Alaka"

HUS speaks Kalidasa in his immortal lyrical love poem *Meghdoot* – the cloud messenger. The poem is the request of a *yaksha* imprisoned by the God of Wealth – Kuber, through the rain bringing clouds, to take to his wife a message of his love. Written in the 4th-5th century CE, the 111 stanza poem is divided broadly into two parts – *Purvamegha* and *Uttarmegha*. While the crux of the poem is the letter of love carried by clouds, and the second part the message that the *yaksha* has sent; the first part describes the journey of the clouds over cities, hills, rivers and temples of the Indian subcontinent right up to Alkapuri in the Himalayas.

In this description is an intricate knowledge and familiarity with the Indian landscape and geography – something quite remarkable for that time period. Even more amazing is that the route of clouds illustrated so vividly, is the accurate route of the Indian monsoon.

The uniqueness of monsoons

The word monsoon itself was first used in English in the context of the rainy season in the Indian subcontinent. Monsoon is derived from the Arabic word *mausam* which is used in Hindustani to mean both season and weather.

The monsoon, for us in India, is something we believe as unique to us, perhaps because it is so important for us, where for several months in a year, the heavens stay open and life giving water maintains an almost steady downpour. However, the monsoon is traditionally defined as a seasonal reversing wind accompanied by corresponding changes in precipitation. A more detailed explanation stresses on the asymmetric heating of land and sea, and the atmospheric circulation caused as a result of it. Global monsoons are identified on every inhabited continent with Asia having two – a South Asian and an East Asian monsoon.

While the months of June to September are popularly recognised in India as the rainy season, in actuality, the country

experiences two different monsoons – the much eulogised Southwest monsoons and the lesser known Northeast monsoons. The baking heat of the summer creates a low pressure area over north and central India, and to fill this void, moisture laden winds rush in from the Indian Ocean. The Himalayas block the movement of the wind and the winds begin to rise and as their temperature drops, precipitation occurs.

However, as these winds begin their passage into the subcontinent, due to the topography, they get branched into two separate formations – the Arabian Sea branch and the Bay of Bengal branch. The Arabian Sea branch is the more popular Southwest monsoon winds that first hit Kerala and then proceed northward along the western edge of the Western Ghats.

The Bay of Bengal branch continues towards the Northeast and over the bay picks up more moisture, all of which gets dumped in the regions of the Eastern Himalayas, with places like Cherapunjee and Mawsynram in Meghalaya holding the records for the highest amount of precipitation in the world. The influence of the Southwest monsoon is felt from Kerala right up to the Northwest Chinese region of Xinjiang which borders Mongolia, Russia and Kazakhstan.

While these changes in wind bring rain to the subcontinent, the sun begins its southern sojourn, and by September is fast slipping away south, causing pressure to build in the Indian landmass, while the ocean to the South still retains the heat. This causes the wind to move south from the colder Himalayan and Gangetic plain regions through peninsular India, to the ocean. It is from this monsoon that parts of South India and Sri Lanka receive a significant amount of rain. This monsoon of South India typically lasts from December till March.

The importance of the Indian monsoon

The importance of the monsoon to India is evident in the yearly ritual of over a billion people looking southward to spot the dark clouds. India is mainly rain-fed. Over three-fourths of the country's water supply is carried in by the Southwest monsoon winds, and over half of the country's farmlands that have no access to irrigation, depend on this timely event to grow crops that will feed one of the largest consumers of food in the world. As early as 1925, the Royal Commission on

Agriculture in India had described the Indian economy as a gamble on the monsoons, and this spectre continues nearly a century later where it is still a good monsoon that drives the economy. Winds from the Indian Ocean remain the ex-officio, but true finance minister of India.

In Sanskrit, the monsoon is called 'Nairutya Marut'. Maruts are storm gods and sons of Rudra, whereas Nairutya, in the Indian science of Vaastu is the name given to the south-west direction. So, though the 'Southwest monsoon' be a recent term in a new language on this ancient land, its speakers too saw the dark clouds and understood that from the Southwest, comes a season – the monsoon.

The first historically extant record of the knowledge and use of the monsoon phenomenon is from Hippalus (probably 45-47 CE or 1st century BCF) а Greek navigator/merchant who is credited with discovering a direct sea route from the Red Sea to India. However, given the knowledge that in the Hellenistic era of the time of Alexander, the wind currents were called Hypalus (note the similarity to Hippalus) and that the ancient Harappans, eight



Coastal voyages from the mouth of the Ganga to Sri Lanka were once a regular phenomenon. The close ties of Emperor Ashoka (3rd century BCE) with the kingdom of Anuradhapura in Sri Lanka and the further multinational kingdom of the Cholas are evidence of global outreach. Along the East coast of India were ports known to the ancients as Tamralipti, Chilika, Palur, Kalingapatnam, Dharanikota, Masulipatnam, Arikamedu, Kaveripatnam, Nagapatnam and Sopatma, from where voyages were made to countries as far off as present day Bali and Vietnam.

However, where the sea farers of the Arabian used the summer monsoon winds to come to India and were able to

return during the winter monsoon, those on the East coast set sail during the winter monsoon and returned during the summer monsoon. Traders usually travelled the distance of one monsoon, and used the reversing wind to go back to their home. It was these winds that brought spices from Southeast Asia and the gold from Europe to India. And when they reversed, the world was clothed in Indian fabric.

The Arabs had long held a choke grip

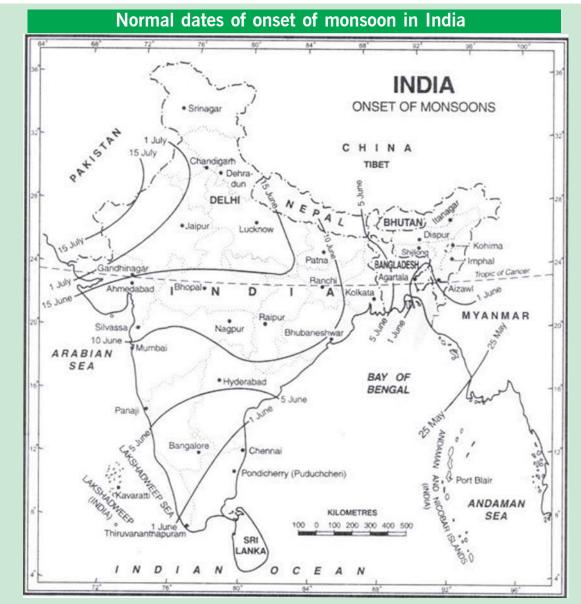
millennia prior carried on maritime trade beyond the Arabian, it is quite likely that both the sea routes and the seasonal winds were known to Indians and the peoples of middle eastern countries, long before Greeks and Romans took to these seas.

No matter who did it first – and the older it is, the more incredulous it gets – but the discovery that in late spring, a bolt across the sea would be faster...the guts to do that...at a time when sailing with the land in sight was the norm...that irreverence bordering on madness is what civilisations and human evolution are made of.

Just as the Arabs and the East Africans used the trade winds of the monsoon across the Arabian Sea, the dwellers of the eastern coast too used the monsoon winds such that the countries around the bay, became a hop across the pond of Bengal. on passage across the Arabian and it was only in the 15th century that Vasco da Gama broke through and landed at Calicut, and then along came the heavy cannon warships that began the era of European domination on the high seas. With the advent of the Dutch and then the British East India Companies, which made colonies in the areas it could once only yearn for, the flow of goods became unidirectional, breaking the back of all the Asian economies.

As the wheels of time turned, the age of science emerged triumphant, and along with it came the discovery of oil as wood was replaced with steel, and the triangle dhows that had dotted the blue expanses were relegated merely to a display of a primitive past.

The trade that the monsoons heralded and sustained the world for, they alone know how many thousands of years,



The monsoon is one of the oldest weather phenomena in India and the sub-continent, and its successful advent has far-reaching economic implications. The Indian monsoon has two branches – the Southwest and the Northeast monsoons. The Southwest monsoon sets in over Kerala and proceeds northward, along the western edge of the Western Ghats. The lesser known Northeast monsoons benefit South India and travel southward towards Sri Lanka. As early as 1925, the Royal Commission on Agriculture in India had described the Indian economy as a gamble on the monsoons and this spectre continues nearly a century later, where it is still a good monsoon that drives the economy. Winds from the Indian Ocean remain the ex-officio, but true finance minister of India.

may have been grounded, but the memory still lives on in wind and ocean currents and the social and religious festivals that mark their onset. Kartika Purnima (full moon day of Kartika in the month of November) is celebrated in Orissa as Bali Yatra (journey to Bali) and marks the time of commencement of these trips and Khudurukuni Osha is celebrated in the month of September, mainly by unmarried girls, imitating their ancestors who waited on the Southwest monsoons to return their brothers to them...hopefully richer.

Perhaps this shift of focus from being trade winds to just water bearing ones is all for the better. The need for fresh water today trumps everything else that humans do, and the monsoons are that magnanimous giver of life for a large number of the earth's and India's creatures.

While the need and importance of the monsoons turns ever precious and makes people regularly anxious; the calculations for understanding it and predicting it turn



increasingly complex, for the monsoons are unmindful of what legions of algorithms decide.

As they have been for all of history, known and unknown, the *mausam* of the Maruts remain consistent in their vagaries.

Akul Tripathi is a media professional and freelance writer.

THE INDIAN MONSOON

...And the rains came dancing down!

Playing in the rain, dancing in the rain, shooting a film in the rain? Filmmaker **Bidyut Kotoky** vividly describes his experiences of shooting for his films in Assam, where it rains almost through the year. Sometimes the rain was an integral part of the script, but more often than not, was an uninvited, but determined guest, and had to be accommodated with a smile!

NLIKE most other people, my childhood memories associated with rain are not exactly happy ones. And you can't really blame me for that. I remember looking up longingly at the grey sky and requesting her to stop weeping so that I could go out to play cricket with my friends...and more often than not, my plea was rejected! Yes, I also used to find all the songs and dances with rain (even if it is in the make belief celluloid world of a Hindi film!) a bit ridiculous – after all, what's so great about getting drenched? We experienced it all the time, throughout the year! Well, now I can look back at those days and say philosophically that those experiences were an intrinsic part and parcel of growing up in one of the rainiest rain belt of the world – Assam.

It is only when I came to Pune for my graduation, the craving and the beauty of the first rain of the season after the killing dry summer of western India began to seep into my psyche. The monsoon treks to different laps of the Sahayadris become more like a pilgrimage in my college life... those budget trips (thank God there are no Mcdonalds or Pizza Huts, yet, in the middle of the Sahayadri's trekking routes – one could have yummy *Pithla bhaakri* and *Kanda bhaji* prepared by the simple village folks and handed over happily in exchange for love and whatever little extra we managed to offer during our perpetually broke student life), also provided the much needed supply of oxygen that I required to absorb the shock of being exposed to the cruel life in the big city...

And by the time I started my journey as a filmmaker, my love affair with rain was complete – it became an important character in many of the stories that I wanted to tell, especially in the feature films. After all, as a writer and director, you have the liberty to play God in feature films – you can make it rain and stop as you please as per the script you are writing (see how I got even with the weeping sky for not honouring my sincere request as a child?)



Actors on the broken wall - "...with a newly bathed, fresh earth to welcome us" (Photo: Nitesh Batra)

Shooting on the mighty Brahmaputra

In my first feature film '*Ekhon nedekha nadir xipare*' (As the river flows), we had a storm sequence set at night, presumably in the bosom of the mighty Brahmaputra. The production logistic forced us to shoot that sequence in Mumbai's Film City with artificial rain...Not exactly my favourite option, but I didn't have much choice considering the small



With the garden umbrella during the shoot (Photo: Partha Baruah)

trailer we glimpsed of what an actual storm in the Brahmaputra could be like that we experienced during our shoot in Assam. It so happened that we were shooting a boat sequence in the Brahmaputra - the actors were on one boat, and we along with the camera crew on another 'combined boat', viz., two boats joined by bamboo and wooden planks so that we could have a sort of platform for the camera. And it was a night sequence, shoot of which went on till the wee hours of the morning, when the mighty river decided that we had disturbed his sleep enough... The clouds must have been gathering in the sky for a while, it was difficult to know exactly for how long, at the dead of night with lightning being the only indicator along with the steady wind... Well, wind one tends to ignore - it is difficult not to expect wind when you are in the bosom of the Brahmaputra at the dead of night with the monsoon season on the anvil ... And then the thunderstorm struck, giving us almost no prior warning! Before we knew it, our 'conjoined boat' was tossed around like small paper boats by the menacing storm - but thankfully, rather than pushing us towards the swirling river, it pushed us to his bank...And in an instant, the impact of the crash broke the wooden planks joining the boats! We thanked our lucky stars that the wooden planks were the only things that crashed that night, while we rushed to our vehicle to take shelter from the blanket of rain which came pouring down.

The kindly rain

Recently, when I was planning for my second feature film 'Xhoixobote Dhemalite' (Rainbow fields), there was no sequence with rain that was built into the script. But when you are planning to shoot a film in Assam starting third week of April, obviously you have to factor in rain as an uninvited guest, who is going to visit you unannounced sometime or the other. We were prepared to greet rain with an open mind. Yes, we knew very well that pre-monsoon in this part of the world can be much, much wetter than actual monsoon in many parts of the country. Yes, we knew that the shooting location of this film, bordering the hills of Arunachal Pradesh, made us that much more vulnerable to the rain - the floating clouds are sure to crash against those looming blue hills and to come melting down...'We will use the rain as a character of the film' - quite confidently we assured ourselves, as I requested the different department heads to pull out the umbrellas...The sound departments started off by buying the balloons as a precaution to store the mikes (inside the actors' costumes) in case we decide to shoot outdoor while it was raining. The production guys emptied the nearby markets of raincoats. We were ready to face the rain... or so we thought!

It started in the second half of the first day's shoot. And continued, for the next three days or so. Forget shooting, it was a challenge to take a few steps outside, even with the umbrellas. Being a 'smart planner', I had planned maximum outdoor sequence in the first week of the shooting schedule. 'After all, chances of rain progressively increases as we move nearer to the monsoon' - was my 'smart reasoning'. And accordingly, the indoor locations of the film were planned for the second week of the shoot, and were under construction keeping that deadline in mind - so there was no scope of moving indoors to utilise the time... The combined consequences of all these factors resulted in us being almost 25 percent behind schedule in the first week itself (of the total 20 days of shooting schedule)! And if you want to know what it means in the world of film, just keep it as your secret weapon to use against any director/ producer of independent films whom you know on a personal level and really dislike - this kind of news for their under production film is a sure shot guarantee to raise their blood pressure to almost uncontrollable levels!

(Continued on page 19)

Did you know?

Thunder and lightning are a part and parcel of a normal Indian monsoon. But did you know that approximately 500,000 lightning strikes occur during a monsoon? India perhaps experiences the most dramatic monsoon and it is routinely accompanied by flooding of our roads and life coming to a stop on some of the rainiest days. Most of India's rain falls during the monsoons and more than 60 percent of India's agriculture is dependent on these rains.

THE INDIAN MONSOON

It's raining snacks!

Come rains, and all we can think of is piping hot tea, served with spicy pakoras, bhajias and vadas. Momos, noodles, sandwiches and bhels can't be left too far behind either, says Anuradha Rajan, making us drool in anticipation.

UST thinking about snacks on a rainy evening has made me take two trips to the kitchen and retreat with the same speed after checking the ambient temperature. The second time I got myself a Marie biscuit before I left. So is it the fall in temperature that makes one want to eat hot and spicy stuff? Why doesn't this phenomenon happen when winter does a cameo in Mumbai? I guess, the rain kind of makes you home bound and thus, food lore is created.

Snacks have to be accompanied by *chai* (tea) which is preferred over coffee or other beverages. Varieties of tea are now available, with masala *chai* being the top favourite. But I personally would like to spice it down and have a lighter tea, even maybe a mint or lemon tea without milk. These would also help in the digestion of the deep fried goodies that are being consumed with it.

Snacks with fillings

Samosas are an all-time favourite, and the fillings vary from the much loved 'aloo' (potato) to mutton. With the invention of the frozen samosa *patti* or a kind of shortcrust pastry strips, it's very easy to make it at home. Nowadays, we have spinach and cheese or mashed peas as samosa fillings, but the monsoon demands just a bit of indulgence. So the Punjabi samosa it is. No need to bother with the *chutneys*, just have it with a hot and sweet tomato ketchup.

Bread pakora is a favourite in the northern parts of the country. They are sold out by mid-morning at college canteens in Delhi. With a potato filling or just plain, dipped in a gram



Tea, pakora, samosa; the classic monsoon treats!



Kerala style tasty parippu vada

flour batter and deep fried, it is indeed a 'slice' of heaven. When making at home, instead of doing neat wedges or squares, one can just crumble the bread slices into the batter and fry them as bread *bhajias*. This can be eaten with a tangy tamarind *chutney* or just ketchup.

Memories of train journeys through Kerala brings to mind two railway station and street side staples, the *pazham pori* (banana fritters) and *parippu vada* (lentil/dal fritters). The *pazham pori* is ideally made with the Kerala plantains (*nendra pazham*), as they are firmer and easier to batter fry. In this case, the batter is all-purpose flour and this is best eaten as soon as it's prepared, as otherwise it becomes a bit soggy. As kids, my brother and I hated bananas, but we loved the outer jacket of the fritter and we would sneakily throw the banana slice away!

The *parippu vadas* are made with *chana dal* and is one of the snacks you can't just go to the kitchen and prepare, as the *dal* should ideally soak in water for about three hours. It's one of the crunchiest snacks from South India due to the coarse grinding of the *dal*, so watch out for those dental fillings and caps! The greatest fun is biting into a piece of green chilli in the *vada* and trying to soothe your taste buds with a quick sip of tea. Doesn't help, but worth the experience! A lighter form of the *parippu vada* would be by using *moong* *dal* instead of *chana dal*, and it wouldn't need much soaking time either.

Pakoras are one of the most friendly rainy day or any day snack. Mix gram flour batter with some asafoetida (hing), turmeric, chilli powder and salt and you can dip whatever catches your fancy or is available, and deep fry. From vegetables like spinach, onion, cauliflower, capsicum, chillies, cabbage and potatoes, to paneer, anything is welcome on a wet gloomy day. If you crave more potatoes, we have the *batata vada*, Mumbai street style, and the *bonda*. Both would require the effort of cooking and mashing the potatoes and the seasoning according to what your heart desires.

I don't know if I should say this, but since a clean chit has been given, you can forgive me for mentioning a particular noodle brand as the ultimate 2-minute snack for a rainy day. If you don't want to use the tastemaker, just cook the noodles, and in a pan toss it around in a bit of oil with some soy sauce, chilli sauce, salt and chopped capsicums or spring onions. It's hot in every way. Pasta is another favourite in my house. Cooked al dente and tossed in a readymade sauce or just olive oil and seasoning and a sprinkling of grated cheese, it is quick and if you want to put in that effort, go for the white sauce, and it's comfort food all the way.

Nowadays, we find momos at every street corner and since it's steamed it should be safe enough, but avoid the sauces as the humidity could cause all kinds of germs to grow and thrive. It might also be a good idea to have the vegetarian one. For the health conscious, sweet corn boiled and seasoned with salt and lime is great or a corn bhel with chopped onion and coriander and garnished with crunchy sev on top is very satisfying.

The kids are my excuse for cheese consumption, and nothing makes them happier than a grilled chilli cheese sandwich if you have a sandwich maker or on your *tava*, and a chilli cheese toast in an oven. If you want to make the open chilli cheese toast in a microwave it would be great to toast your bread first. Bread rolls could also be an option and deep fried goodies are always a favourite since they are easy to make. Just wet the bread slice, squeeze out the water, put in your grated cheese or mashed and seasoned potato with or without cheese or any other fillings, and make a tight ball



Steamed momos are a safe bet, avoid the sauces though! with the bread slice, sealing as much as possible, and fry till golden brown. It's gooey on the inside and crisp on the outside. I have even tried filling it with broken cooking chocolate and it works beautifully with the inside filled with lovely oozing chocolate. You will be your kids' favourite person in a second!

Food safety is of prime importance and can't be ignored during the monsoon. It would be best to avoid cut fruits and vegetables from the market or salads in places in restaurant buffets and parties. Certain vegetables like bitter gourd (*karela*), turmeric (*haldi*), and fenugreek (*methi*) have protective properties. Vegetables like cabbage, cauliflower, spinach and beans should be washed in salt water before cooking to kill the germs thriving on them. Lentils, chickpeas, oats and corn are the safest option during rains. If buying sandwiches from out, stick to the grilled or toasted ones, instead of the cold variety. Even hot soups whether prepared at home or packaged, are a great idea for the rainy season, especially if you feel



that cold coming on. But if you feel like it, just go for that *bhutta* with that awesome masala on it, because the monsoon is the one season that demands to be celebrated.

Anuradha Rajan is a mother of two, with a passion for cooking and food presentation. In an earlier avatar she was a high school teacher of English and Environmental Science.

Interesting facts

Water can also fall from the sky in the form of hail, sleet or snow, and not just as rain. It rains on other planets too, not just Earth. On Venus, and other moons and planets, rain is made of sulfuric acid or methane. Allegedly, on a planet 5,000 light years away, scientists found raindrops made of iron rather than water. On Earth too we sometimes get something called 'acid rain', which is rain with elevated amounts of acid or hydrogen ions. It is caused that because of the release of Sulphur Dioxide and Nitrogen Oxide into the air. In deserts, when it rains, chances are that you might not get wet, as the rain sometimes evaporates under the influence of hot air, before it hits the ground. This rain is called 'Phantom rain'!

THE INDIAN MONSOON

To rains, with love

From festivals that celebrate the onset of rains, to the birth of Lord Krishna, the rainy season is a joyous one in the Indian calendar. **Disha Shetty** describes the festivals associated with rains.

HEN I woke up groggy eyed, I heard loud sounds, like crackers bursting in the background. I asked my mother if there was a party in the area, but she told me it was raining. I ran to the window which was too high for me to reach. Chair to the rescue! I climbed on the nearby chair, grabbed the horizontal iron bars of the window with my chubby hands and stared out. Water was falling from the sky. Lots of it! The playground outside was mucky, and there, I see frogs!

My mother came with a baby toothbrush in hand, asking me to start brushing. I know I can take my time with the window. She will request a few more times before she gets angry and starts yelling. Yes, the 3-year-old me knew that already, but for now, I wanted to simply stare out. Is the sky crying? Will the frog also brush its teeth? How will this big toothbrush fit inside a frog's mouth?

There's something about the monsoon that fires the imagination of every person – no matter what the age group. Many of India's festivals are linked to the season. After all, with the rains come the hope for a better future, and possibility of a good harvest. Does one need more reasons to celebrate?

Let's take a look at some of the festivals across the country linked to the season of rain.

Minjar

Agriculture and monsoon have the closest ties – how else would our largely agrarian economy survive otherwise? In the Chamba region of Himachal Pradesh, the festival is initiated by distribution of minjar – a tassel of silk worn to symbolise shoots of maize and paddy. Idols of various deities are also immersed in the river. Colourful procession, cultural performances and an aura of festivity is how the locals mark the seven days in July.

Onam

A harvest festival celebrated in Kerala, Onam is a time of great activity in the state. It is marked by boat races (*Vallamkali*), elaborate meals (*Onasadya*) and the demonstration of Kalaripayattu (martial arts form). It is as vibrant as nature is when lashed by showers of the rain. For those living outside Kerala too, it is a time to revive ties with



Human pyramids try to break the curd-filled earthern pots to mark Gokulashtami

their home state and guests are treated to sumptuous food. A Malayali household on Onam is decked up like a bride, and flowers take the centre stage in the decorations.

Dahi handi

The festival when being loud is excused and incidents of eve-teasing touch an all-time high, all in the name of the naughty Lord Krishna. In its true essence though, Gokulashtami or Janmashtami that celebrates the birth of Lord Krishna turns into a big event in Maharashtra, especially in Mumbai. Human pyramids are made to break the earthen pot filled with curd, tied at a height. It is believed that curd was the favourite of a young and naughty Krishna who would forever try to steal it. People gather on the streets to witness the human pyramids as different groups try to reach the earthen pot in the hope of bagging the cash prize. And of course there is the generous splash of water!

As for me, despite living a quarter of my life out, the rains continue to fascinate me. The reasons are different now. Living in a city like Mumbai where one barely registers the change of a season, monsoon is a delight. Whether it is thinking about a crush, a lost love or in the middle of a heady romance



Visarjan at Girgaum Chowpatty at the conclusion of the Ganesh Chaturthi festival

 nothing quiet awakens the heart like the sound of the raindrops falling or the sight of the leaves dripping with water.

Moatsu Mong

May is when the monsoon comes to most of the areas in the Himalayas. In the hilly state of Nagaland, this is the time to relax before the grueling work begins again. So in the first week of May, the Ao tribe of Nagaland spends time simply relaxing and enjoying. The tribals eat, drink, dance and sing with gusto.

It is not just enough to lap up the bounty offered by nature, but over centuries our society has also felt the need to show gratitude. There are some festivals that emphasise the need to respect what we have and more important, in the times of recurring drought, we have to learn the message of conservation that our forefathers swore by.

Ganga Dussehra

The festival is celebrated at all major *ghats* in the country such as the ones at Haridwar, Prayag and Rishikesh. It marks the descent of the holy river Ganga from heaven to the Earth. Thousands of people are a part of the rites and rituals that take place every year to pay tribute to the water body.

At a time when the river is choking due to pollution, maybe it is time for us to take the essence of this festival seriously?

In a city like Mumbai where I live, there is no way you can miss the torrential downpour that for once slows down this city. How I envied the freedom when the boys in my class would play football in the rain and come back home covered in mud to be scolded by their mothers only about the condition of the school uniform. When I first intentionally got wet in the rain in class 6 after the school hours, I was called 'tomboy' by a teacher. The basket ball court was full of boys

using the space to play football in the rain, but for a girl to break the rules...unacceptable. With rains came one of my earliest lessons about gender inequality.

Teej

How can the celebration of the union of Shiva and Parvati not be during the season of love? It is marked by the festival of Teej that is widely celebrated in northern India and Nepal. Young girls and women sing songs, fast and dance during this time. Teej is also a celebration of the bounty of nature, greenery and birds.

Raksha Bandhan

What is the worst thing that can happen to you when you have a crush on a girl? In India there are chances that your dream girl might just come to tie you a rakhi – signifying that she now considers you her brother. Growing up, it is a festival most of us girls have used to send out a signal to that boy who secretly admires us that, nope, I am not interested in you. Though not directly connected to the monsoon, it falls during the season of romance or shall we say sisterhood?

Widely celebrated in several states of India, Raksha Bandhan is the day sisters tie a colourful thread around her brothers' wrist that signifies their strong bond. The brother in turn promises to protect his sister. Oh, and he is also expected to give her a befitting gift. Rains are also the time the divine decide to pay you a visit.

Ganesh Chaturthi

'Ganpat Bappa Morya' is the cry in the streets of Mumbai as Lord Ganesh makes his annual visits to homes, housing societies and *pandals* across the city. Amidst the slight drizzle towards the fag end of the rainy season, devotees sing *bhajans* and welcome Lord Ganesh. If Rio de Janeiro has its carnival, Mumbai has its Ganesh Chaturthi. If you think this is an exaggeration, then spend a day in the streets of Mumbai during this time, and soak in the energy.

By the time we say good bye to Lord Ganesh, who also unfortunately leaves behind a trail of Plaster of Paris, it is also time to bid a farewell to rains. The Arabian Sea too is unhappy, as for the coming weeks it will fight with the shore, throwing back the waste that will be in various stages of decomposition.

As for me, saying goodbye to the rains is never an easy task. I never get enough of getting drenched. By now I would have reached office drenched several times, but it is an experience the rain loving me would not trade for anything else. For a 20-something, can the world ever get more romantic than this?

Disha Shetty is a young journalist who has recently discovered the joys of travelling.

THE INDIAN MONSOON

More precious than gold

Rain water harvesting is the perfect solution for our water starved cities, where increasingly, tankers supply water sourced from distant areas. So, harvesting rain water not only saves what would otherwise go waste, but also recharges the underground water table for long term benefits, says **Usha Hariprasad**. Are our cities listening?

3.000-litre tanker costs around ₹ 500 in Bangalore. We relied on two such tankers per day for our 30-flats apartment complex in Bangalore North. Then we went in for rain water harvesting. And things changed. The dependency on the tankers lessened, our ground water got recharged, and the bore well yield increased significantly. A similar story unfolded in south of Bangalore, this time with a 220apartment complex, SLS Splendour, which used to bring in about 22 tankers with 6,000 litres water capacity daily. With rain water harvesting in place, they were able to save 3-4 tankers of water for every 45 minutes of water they captured. This is the power of rain water harvesting. It recharges the surrounding aquifers, prevents rain water flooding in the city roads due to runoff water, and what's more, is economical in the long run.



Rain water harvesting, an old tradition

Rain water harvesting is not something new. In fact, it is as old as 3000 B.C., you could say. Rain water harvesting was a natural thing to do in villages till the 18th century. The *kalyani* and *keres* in temples of Karnataka, the *surangas* and *madakas* in Kerala, the step wells and *tankas* of Gujarat, the *talabs* found in most parts of North India; all these are just some examples of traditional rain water harvesting done in our country. While *keres* and *talabs* are lakes, *madakas* are depressions or low lying lands that accumulate water. *Surangas* are caves/ horizontal wells while *tankas* are underground reservoirs for storing water. Tanks, channels, embankments, canals, pits, check dams – different parts of the country followed different means to capture rain water. Yet, over time, this traditional wisdom has been lost and neglected, with cities and villages reeling under water scarcity.

Today, however, interest in rain water harvesting has been revived. The rising cost of tankers, low yield of bore wells and in some cases, legislations too have helped. In Bangalore,

A rain water harvesting system in a building

for example, apartments will be penalised if they are found without a rain water harvesting unit in their premises. A 25% fine will be levied on the water bill for the first three months that changes to 50% after that. Chennai has made rain water harvesting compulsory for three-storied and above buildings, while cities like Ahmedabad have made a percolation well compulsory for buildings covering an area of 1500 square metre. Some cities like Indore offer a 6% rebate on property tax for buildings with rain water harvesting systems in place.

Rain water harvesting, a system to capture and store water or recharge ground water is easy to implement if you have a catchment area, say a terrace or ground/driveway. The water thus collected via these open spaces can be put to domestic use like drinking or cooking, or can be used to further recharge the ground water.

The basic components of a rain water harvesting unit

Paved-unpaved surfaces, open grounds, lawns, rooftops and driveways can be considered for harvesting rain water. Apart from the catchment area, you will require pipes, rain water separators, filters and storage tanks. The storage tanks can be sumps, tanks, or simply rain barrels to store water, or they can be open wells, bore wells or recharge pits to recharge the ground water levels. The storage sumps and tanks can be above or below the ground.

Rooftops and driveways used for rain water harvesting: The process of installing a rain harvesting unit is simple. In case of rooftops, PVC pipes are attached from the terrace to carry rain water below to the sump. As the first burst of rainfall on the terrace is likely to be heavy on suspended particles and pollutants, there is generally a rain water separator with a gate valve to let off this water and prevent it from entering the sump. The pipes lead to a sump or a barrel after passing through filters that make the water suitable for consumption.

Overflows from the sump can be directed to open wells or recharge wells through an overflow pipe.

Similarly, driveways can also be used to conserve rain water. The water collected via driveways is best directed to recharge wells as it contains large amounts of silt. Storm water drains, gutters and bumps are generally used to direct the runoff water appropriately and divert it to recharge wells to increase the water quotient of the water table.

The total water harvested from rain water harvesting units depends on catchment area and annual rainfall. It is a product of these two coupled with runoff coefficient, i.e., losses due to evaporation etc. The runoff coefficient is taken as a number between 0.8-0.95. So if Bangalore has an average annual rainfall of

972mm and if the roof top area is 100 square metre in a house, then volume harvested turns out to be approximately 83,000 litres.

Common filters used: PVC drums, stainless steel filters, Ferro cement filters are generally used for further filtration for storage tanks. The filters are attached to the down pipes. At the top of these filters there is a wire mesh to filter the suspended particles. The drums or filter containers are filled with sand, gravel and charcoal to remove particles and odour. A stainless steel filter does away with sand and gravel. And that's one of the reasons why they are expensive compared to other types of filters. For storage tanks on the ground like rain barrels, the top of the tanks have a filtration mechanism consisting of an aluminium box with mesh and sand, gravel, jelly or sponge that filter the water impurities before it is stored.

Recharging ground water: The runoff water can also be used to recharge the ground water by constructing structures

like recharge pits and recharge wells. Dry wells, trenches and tube wells can also be used for recharging aquifers. In areas where permeable rocks are present on surface, recharge pits are one of the better options. A recharge pit is a pit that is dug until you hit a weathered rock or porous soil. To filter the water entering into the pit, large stones or jellies are put at the bottom of the pit, then smaller-sized stones, gravel and pebbles in between, and finally sand at the top. This ensures that water is filtered in stages before it percolates to the ground.

Recharge wells on the other hand, are dry wells fitted with perforated rings. In such wells, the water percolates both vertically and then horizontally through holes in the rings. Over time, a recharge well too has the potential to become

> an open well that yields water. Rain water from the terrace and water through storm water drains can be diverted to the well through proper filtering. The inlet pipe to recharge well generally has a netlon mesh for filtration, and the well is covered with a slab or a steel grill. A 20-feet recharge well can store up to 4000 litres of water.

> The cost of installation: The cost of constructing a rain water harvesting unit depends on the site. If there are pipe outlets from the terrace or there are open wells/tanks/ sumps that can be reused, then the expenses come down considerably. The cost can be from anywhere between ₹ 3,000 for a single-block apartment, to ₹ 50,000 or even more for a bigger apartment complex. The apartment complex SLS Splendour spent about 3.3 lakhs for the harvesting unit that included piping,

trenching, adding filters etc.

The biggest expense is the storage tank. In areas which boast of good rainfall, the storage requirements are low, and hence the cost of tanks too comes down. If the dry months are more, the tank capacity also increases, in which case the cost goes up. The storage capacity of a tank is determined by the dry season, number of family members and their consumption. So it is better to talk with a rain water expert in your area to get a fair idea of what



components to use, the design and layout best suited for your terrain, to make your rain water harvesting unit work successfully.

Usha Hariprasad is a freelancer who is fond of travelling, discovering new places and writing about travel related destinations around Bangalore at Citizen Matters. Currently, she works in a trekking organisation.

harvested from rain water harvesting units depends on catchment area and annual rainfall. It is a product of these two coupled with runoff coefficient, i.e., losses due to evaporation etc.

The total water

THE INDIAN MONSOON Being rain ready

We look forward to the rains with a lot of happiness. But be aware that you have to take a lot of health and other precautions to enjoy it properly, says **Dr. T.D. Rajan**. He narrows it down for us.

"There once was a child in Spain Who loved to play in the rain One day he tripped And broke his hip Now he is in serious pain"

HIS little limerick doing the rounds of the internet succinctly sums up the thrills and risks of the rainy season. Monsoon is the season of joy as it brings relief from the sweltering heat of summer. The showers brought in by the cool sea breeze not only helps the farmers, but also cheers up our economists who make predictions for the forthcoming year. Even as the rivers, lakes, ponds and wells fill up, monsoon brings along with it numerous challenges to the government administration.

At the individual level too, the rainy season poses several problems. We have to stock provisions, be ready with monsoon gear and plan schedules based on the weather. However, the most important factor during this wet season is the possibility of illnesses. Many health problems occur due the overcast sky and humid conditions, pollutants in the air and rain-related calamities like flooding, lightning attacks and epidemics. Let us look at some of the conditions we can avoid encountering this monsoon.

Broadly, health issues occurring during the rainy season in this part of the globe can be classified into two groups:

- 1. Primary ailments occurring during rainy season
- Secondary ailments resulting from rain-related accidents and injuries

Primary ailments

Fever: Most general practitioners' clinics would be overflowing with children and adults during this season, and the commonest complaint would be "fever." Fever is the body's immune response when it tries to fight an invading germ.

• *Flu* or *viral influenza* is the commonest type of fever. The temperature is raised by 2-3°C. Cough and running nose are the accompanying symptoms. It usually settles down on its own, without any treatment, when the patient takes rest and has nutritious food.



Flu and viral influenza are very common during monsoon

- Malaria, dengue and leptospirosis cause specific types of fever which causes severe weakness. All these diseases present with high grade fever with chills, muscle pain, fatigue etc. Dengue patients may show bleeding gums or bruising on the skin. Appropriate treatment with medications is necessary, sometimes hospitalisation is also required.
- Chikungunya is another type of fever associated with joint stiffness and restricted limb movement. Unlike other types of fever, symptoms could take several months to return to normalcy.

Respiratory disorders

- Asthmatics get an aggravation in their breathing disorder due to the high humidity levels in the environment.
 Pollutants remain embedded in these water droplets, triggering an attack of asthma. Inhalers and anti-asthma tablets may be necessary to combat this condition.
- Running nose and cough are also very common during the rainy season. Symptomatic treatment is usually sufficient to control these conditions.

Digestive disorders

• *Diarrhoea* and *food poisoning* are very common in this season. Repeated vomiting and loose motions may induce dehydration. Plenty of fluids should be consumed to



Athlete's foot is a fungal infection common during rains

compensate for the fluid lost. Butter milk, fruit juices and bland food is advised till the loose motions subside.

- Contaminated food items may cause typhoid fever which also may cause ulcers in the intestine. Antibiotics and rest is always required to treat this condition.
- *Hepatitis A* or the common type of jaundice is transmitted by flies and unhygienic food stuffs. Fruits, juices and a bland vegetarian diet with very little oil content is usually recommended.

Skin disorders

- Constant soaking of feet in rain water will encourage fungal infection like *Athlete's foot*. The skin peels off from between the toes and there is intense itching.
- Similarly, jock itch which is also caused by ringworm occurs due to failure to change from wet clothing. A ring-like pattern of rash is seen in the groin, extending to the genitals and buttocks. Occasionally ringworm is also seen on the abdomen and under the breasts in women who sweat during heavy work in the hot and humid kitchen. Keeping the skin dry and taking bath twice daily are the only ways to keep the skin clean. Antifungal dusting powders will also help. In advanced cases, oral antifungal tablets and creams may need to be taken with a doctor's help.
- Boils may occur on any part of the body, especially in children due to excessive sweating. Antibiotics are usually required. Untreated boils may form large, painful pus pockets requiring surgical removal.
- Prickly heat is the commonest skin rash and appears like a red sheet of skin with fine granular feel. This occurs due to blockage of the sweat duct and subsequent microbial action. Frequent cold baths and prickly heat powders help to relieve the itch.

Eye infections

 Stye and conjunctivitis are common eye disorders. The eye appears blood shot red and there is profuse discharge of sticky fluid. The secretions being infectious, other family members and close associates are often infected. Antiviral eye drops and antibiotics may be required as advised by the doctor.

Secondary ailments like accidents and injuries

- People may slip and fall during rains resulting in bruises and fractures. Diabetic patients may get bad skin infections in such injuries which could have grave consequences.
- Flash floods that occurred in Chennai last year caused deaths due to drowning. Fatal injuries occur when manhole covers get lifted off from the roads.
- Flooding in areas where electric junction boxes are located could lead to electrocution.
- Slippery roads can cause two wheelers to skid and brake failure of larger vehicles causing injuries and deaths. The poor visibility during rains also increases the risk of motor accidents.

Plan your journey well and ensure that the place you are visiting is safe. Otherwise, reschedule your visit. Do not rush into an unfamiliar place unless it is an emergency.

Surviving rain related health issues

Being aware of all health problems that are likely to occur during monsoon will help one to prevent major calamities. Maintaining good health throughout the year will be the best way to avert any calamity during the rainy season.

The following precautions will go a long way in preventing illness during this season:

Be rain ready

- Keep rain shoes, raincoats, umbrellas and windcheaters ready all the time. Keeping the head well protected with a cap during rain will prevent a host of viral infections like cough and cold.
- Change into dry clothes as soon as one reaches home. This will prevent flu, cold and fungal infections of the skin.
- Motorists should get their vehicles serviced, tyres and windscreen wipers checked to avoid breakdown of the vehicle during heavy rains.
- Do not leave the place of work or school if there is flooding in the vicinity during heavy rains. It is safer to be indoors during such time.
- Ensure cell phone batteries are charged to contact family in distress. Keep the phone bound in plastic cover to prevent soaking.

Eat healthy

- While leaving home eat well so that one does not remain hungry in case one is caught off guard in a heavy shower.
- Drinking a hot cup of tea or coffee is a safe option on the street.
- Avoid eating sandwiches and *chutneys* which have the risk of being contaminated.

General hygiene

- Wash hands frequently, do not bite nails and keep good cleanliness all the time, as whatever you touch may be carrying germs due to the damp weather. Use a sanitiser if water is not available immediately.
- Vegetables and fruits should be well cleaned with water before cutting. Store them carefully to avoid any contamination.
- Water containers should be well covered all the time to prevent flies from contaminating it.
- Avoid stagnation of water around the house to prevent breeding of malaria causing mosquitoes. Inform the local municipal authority if there is a puddle in the locality which is under their jurisdiction.

....And the rains came dancing down!

(Continued from page 10)

But just when I thought that I had enough of playing God and would have to re-work the script to make concession for the fury of nature, the nature decided to show us her kinder side...In an almost eerie way, it started raining at night and would stop at the crack of dawn – just in time for our shoot to start on schedule in the morning...with a newly bathed, fresh earth to welcome us, almost every day! Not only that, when we felt the need to have a little drizzle or a



With the blue mountain in the background, during the shoot – "the floating clouds are sure to crash against those looming blue hills..." (Photo: Partha Baruah)

- Visit the family doctor immediately when fever persists beyond 24 hours.
- Carry out all the tests and complete all the treatment advised by the doctor.
- Do not hesitate to take a second opinion if the condition does not come under control within a reasonable span of time.

Monsoons are real fun if our health is in good shape. Make sure that the family remains in close communication and inform each other about the location if any unprecedented showers get you stuck somewhere. Take help of colleagues to use social media to inform family about one's location if the phone network is not available handy. Most importantly, in whatever situation one is in, keep a cool head and stay



where you are. Others will find you!

Dr. T.D. Rajan is a senior skin and sexually transmitted diseases specialist, practising in Mumbai. He advises pharmaceutical companies on drug branding, promotion and marketing. He is a writer on social topics in the print and electronic media, as well as in pharmaceutical magazines. Dr. Rajan is also an hon. consultant to ONGC, Larsen & Toubro and Air India.

cloudy sky to have some kind of continuity with the few scenes we managed to sneak in amidst the pouring rain in the first few days, she ensured that we got just what we required – enough to get the continuity we wanted, yet not enough to disturb the shoot... What's more, the unbelievably pleasant weather during those two weeks in that region, with surplus supply of fresh oxygen, ensured that we had that much of extra energy to put in the extra hours required for playing the catch up...To cut a long ready to welcome you as viewers, you will also find the film fresh and amazing...er, dare I say, not just the outdoor scenes, but in its myriad colours...the *Rainbow fields*!

Bidyut Kotoky is a film-maker and a reluctant writer, whose sole objective for writing is to get his readers curious to watch his films. His documentary *Bhraimoman Theatre* – where Othello sails with Titanic won a special mention in the 53rd National Film Awards. For his debut feature film in Assamese, *Ekhon Nedekha Nadir Xipare (As the River Flows)* he won the 'best script award' for the period 2010-2012 at



the Assam State Film Awards. The film also won awards at the 2013 Washington DC South-Asian Film Festival and the 2014 North Carolina South Asian Film Festival. Since the last 3 years he has been busy with his feature length documentary *Guns and Guitars – a musical travelogue*, which is in its final stage of post production. Made with self-raised funds, the film will be ready for release soon. He has just finished shooting for his film *Rainbow fields*.

THE INDIAN MONSOON

Barso re megha megha...

Rain has always triggered creativity in Bollywood cinema. There is something about this season that has unfailingly caught the creative imagination of Bollywood, making it come up with some really memorable songs and scenes of Hindi cinema. Shoma A. Chatterii dwells on some of those sublime moments.

ONG before the term "Bollywood" came into being and Indian cinema was largely identified with Hindi films, the wonderful, raga-based number Lapaka jhapaka tu aare bhadarwa belted out in the golden honey voice of Manna De in Raj Kapoor's Boot Polish became famous. Whether you like rains in real life or not, you love it in films because of the visual beauty it adds to the landscape, and the music that invents itself to be expressed in the most imaginative use of melody, rhythm, lyrics and voice one can imagine.

of heavy rains was in Rahul Rawail's Arjun (1985) starring Sunny Deol. The scene is a highly stylised picturisation of a nail-biting chase between two main characters in a crowded rush of people sheltered by black umbrellas. It is a beautifully orchestrated scene that brings out the effervescent essence of restive youth.

Another unforgettable rain sequence is in the opening frame of Woh Kaun Thi (1964), a mystery thriller directed by Raj Khosla. On a dark stormy night, the hero, a doctor, is on his

The Hindi film fanatic's love for the remains rains unabated till today so long as the rains remain confined to the screen. So, when Aishwarya Rai dances in the rains and sings Barso re megha megha splashing about in the slush and water in Mani Ratnam's Guru, you often feel like getting up from your seat to dance along with her, whether you can dance or not. This number is an all-



The 1955 movie Shree 420, and the iconic rain scene with Raj Kapoor and Nargis

time favorite by all due to its enchanting music and its lovely lyrics. It is the perfect song for the frolic that one wants in the rainy season. It is an A. R. Rahman classic with Gulzar's lyrics. Shreya Ghoshal sang it. This 2006 release will be remembered for the entire package including the great music.

Action sequences shot in rain double the intensity of the scene and give the cinematographer, the art director and the editor, the scope to explore their talents. One of the best action scenes in recent times that took imaginative advantage

evokes the rain as a metaphor in the lyrics - Naina barase rimjhim rimjhim, using the pitter-patter of the rain as a refrain. K.H. Kapadia bagged the Filmfare Award for Best Cinematography for Woh Kaun Thi.

The magic of the rainy past

Step back to 1955 and take a look at Raj Kapoor's Shree 420. You need not jog your memory to recall the Shankar-Jaikishen number Pyar hua ekraar hua hai, pyar se phir kyon

the

ticked off by Lata

Mangeshkar as her

personal favourite,

darta hai dil delivered through the magic pen of Shailendra, and you encounter a kind of love that spans the present and looks into the future at the same time. We see the black and white figures of Raj Kapoor and Nargis trapped under a single open umbrella in torrential rains, and as they look around, we see Raj Kapoor's three little kids wrapped in raincoats, walking along the rainwashed pavements of Bombay. The lines on the soundtrack say – main na rahungi, tum na rahoge, rahengi yeh nishaniya, foretelling the fragility of the present and the permanence of the future emerging from the magic voices of Manna Dey and Lata Mangeshkar.

It is not just the song sequence that is immortal. The fine blend of Radhu Karmakar's cinematography and G.G. Mayekar's editing offers a textbook example of how songs should be picturised. In the prelude, the camera captures the gathering clouds, the windy air, and the splash of the first drops of rain on the streets. As the song begins, the lovers begin to walk under the same umbrella, and the camera catches the rain-splashed streets to step back and close in on the beautiful face of the woman from time to time. Dark passing clouds add to the richness of the tapestry. One glimpses a smiling tea-vendor sipping tea from his saucer. The street lights drawing an arc in the distance, a double-decker bus passing by, are fore-grounded by the man stepping out of the umbrella to blow into his indigenous blow-pipe. It is one of the most poetic tributes to love in the rains in Hindi cinema. The false sets, the false rain only serve to underline the purity of that sheer cinematographic artistry.

The song *Roop tera mastana* from Shakti Samanta's *Aradhana* (1969) turned out to be one of the most sensually picturised song sequences in Hindi cinema of the time. The lovers (played by Rajesh Khanna and Sharmila Tagore) retire into a hut, and the rain thundering outside makes the couple start a wood fire for warmth. The girl pulls on a red blanket while the boy edges slowly towards her, and what happens next is expressed through the visuals and the song, making it an iconic slice of cinematic history.

One of the most strikingly original rain songs that is as romantic as it is incredibly funny and sensual at the same time that comes to mind is Kishore Kumar belting out *Ek ladki bheegi bhaagi si* in *Chalti ka naam gaadi* (1958), shot in the drab interiors of a motor servicing garage. The sensual charms of the ethereally beautiful Madhubala in a drenched white sari, hair dripping with rain drops as Kishore keeps time with service tools on the hood of a car, is one of the most imaginatively shot rain sequences in the history of Indian cinema. Sachin Dev Burman's tunes set to lyrics by Majrooh Sultanpuri, rendered in Kishore Kumar's voice, is unforgettable in aesthetic terms, in the way it spells out soft, innocent and



The ethereally beautiful Madhubala with Kishore Kumar in Chalti ka naam gaadi

refreshing romance, and in the manner the director uses the language of cinema to express the birth of love between a simple garage mechanic, and a rich and beautiful girl.

Even two very serious actors who reportedly did not get on well, enacted an outstandingly memorable rain scene in a film. Amitabh Bachchan and Smita Patil made the song number appear both exotic and sensual in *Namak Halal*, for which music was scored by Bhappi Lahiri. Smita, in love with Amitabh, gets into a lovely song-dance number atop of a hand cart in the song *Aaj rapat jaaye to hame naa uthaiyo*, in which Smita is clad in a flimsy white cotton sari with a red border that sticks to her slim figure and turns translucent in the rains, while the hero continues to charm her.

Rain, an intrinsic part of Indian culture

Poet and lyricist Javed Akhtar says, "Rain is an integral part of our tradition and culture. India is predominantly an agrarian society. Our people still live in villages, so its predominance is paramount. Our crops depend upon rains, and so rain is our lifeline. Hence, we celebrate rain. For us, it is a source of joy, happiness, optimism, destination, future and so on. Music also celebrates rain. Rain is lesser celebrated in our films and more in our lives. Don't we hear Sawani gaana, don't we celebrate rains over pakodas and chai?" Pandit Ravi Shankar has gone on record to state that to the Western mind the rain is a nuisance or an unwelcome phenomenon. But for us who are totally dependent on the rains for our agriculture, the sight of a rain cloud is a joyous occasion. In Bimal Roy's Do Bigha Zamin, the sight of dark clouds in the sky make the villagers break into the wonderful song-dance number Hariyala sawan dhol bajata aaya scored by Salil Chowdhury.

(Continued on page 43)

The Meghalaya approach

Most of India is water-stressed. **Dr. Arvind Kumar** gives the example of Meghalaya, where the Government of Meghalaya and the India Water Foundation are doing some path-breaking work. Can we really become a water surplus country?

ATER scarcity involves water stress, water shortage or deficits, and water crisis. This may be due to both natural and human factors. But, many reports suggest that the scarcity is more due to the human factor – such as industrialisation, irrigation, domestic use, etc. Water scarcity is the lack of sufficient available water resources to meet the demands of water usage within a region. It affects every continent and around 2.8 billion people around the world, at least one month out of every year. More than 1.2 billion people lack access to clean drinking water.

about 81% of India's ultimate irrigation potential; thus, there is now only limited scope for further expansion of irrigation infrastructure on a large scale. Nevertheless, irrigation is predicted to remain the dominant user of water in the years to come.

Numerous regions in the country are chronically faced with acute water stress. These include districts of South and North in interior Karnataka; Rayalseema in Andhra Pradesh; Vidarbha and Marathwada in Maharashtra; western Rajasthan and Bundelkhand region of Uttar Pradesh and Madhya Pradesh.

Agriculture, the largest consumer

Currently, agriculture is the largest consumer of water, accounting for 84 per cent of total available water, followed by industry accounting for 12 per cent, and the domestic sector which accounts for four per cent. Some experts have argued that India, which currently uses two to four times the quantity of water to produce one



Low and erratic rainfall for consecutive years in these districts have rendered waterharvesting structures devoid of water, and the conservation measures almost unviable. The water storage in reservoirs have depleted, leading to scarcity of drinking water. The moisture index in majority of these districts is in the range of -85 to -50%, denoting that natural

Precious water; worldover, more than 1.2 billion people lack access to clean, drinking water

unit of major food crops as compared to other major agricultural countries like China, Brazil and the United States, can save half of that water, if it attains the water use efficiency of those countries.

India accounts for about 17 per cent of the world's population, but only four per cent of the world fresh water resources. More than 80 per cent of the water needs of the country is met by exploiting ground water. This has accelerated the depletion of the water table, and led to an unprecedented water shortage. Of the total cultivable area, about 60% is rain-fed and remaining 40% is dependent on irrigation. Undoubtedly, the irrigation potential created from various irrigation schemes has recorded massive increase, representing

precipitation is highly inadequate to support arable cropping. Neither normal agricultural practices, nor the contingency measures may help the farmers. Experts have called for focusing specific attention on linking these districts with some perennial source of water.

The rain-fed groundwater reservoirs are over-exploited due to high demand and shortage of supply through rainfall. A significant fraction of the rainfall flows into the ocean without being arrested by any aquifers or water bodies. The potential retrieval of this water to compensate for the scarcity of groundwater in the region can be addressed through rainwater harvesting programmes, either through lakes or shallow aquifers, or revival of traditional water conservation bodies.

ecret, Sacred & Sensational

Tables from Eastern Arunachal Pradesh

"It is like entering wonderland. The trails disappear into an ever deepening, ever darkening tunnel bounded by trees taller than you have ever seen...perhaps taller than you will ever see. Trees that must be standing there for years older than your memory of your ancestors. It is a place where twilight lives all day and then fades imperceptibly into an inky midnight. Great birds crisscross the camouflaged paths you walk. Big birds whose flapping wings make the sound of a large lazy helicopter. You will see water spouting fire and nature will be super-sized. Aaah...and there will be fireflies. Of course there will be fireflies..."

Text & Photos: Akul Tripathi



The entrance to Namdapha National Park, India's third largest national park

UCH was the destiny that the tale foretold. A destiny of impossibilities, a foray into a land that lurks beyond a looking glass. A journey from which you don't bring back memories...instead, leave a part of you behind...a part that will forever exult in a bewitched land. For in each visit, the colours will be brighter, the smells headier and the fireflies will never doom you to darkness.

In a distant northeastern corner of the country, at a place that exists in the shadowlands of people's cognisance of interest and geography – and perhaps due to that very reason – alive, in its own bubble, like a microcosm of eternity, there dwells an enchanted forest.

An enchanted forest

How far is far? Is it distance that makes it so? What distance?



A map model of Namdapha

The one calculated with a measuring tape? Or is it the end beyond a chasm of ignorance – of not knowing? Is it the place beyond where your understanding of places ends? A place far from you or just one that is physically distant? And what happens when you reach a place which is both physically distant and beyond your understanding? What happens then, when your senses are beguiled and your mind stilled in an effort to fathom what you experience? I guess, it is for this feeling that the word enchanted had to be invented.

A visit to the Northeast of the country is always a treat and a test for the senses. There is a diversity in natural life that one rarely encounters in the mainland forests. Life that feels similar, yet is completely new; seemingly familiar, yet unknown. It is this shadowland of acquainted introductions that is the Namdapha National Park.

Namdapha is India's third largest national park in terms of area (1985 sq. km), and is tucked away in its eastern most corner, in the state of Arunachal Pradesh, with its three sides bordering Myanmar. It lies at the junction of three global biodiversity hotspots – the Himalayas, Indo-Burma and Mountains of Southwest China, and between two important river systems – the Brahmaputra and the Salween. The 71,000 square km landscape has seven important protected areas, including Namdapha National Park and Tiger Reserve.

Situated 516 km from Itanagar and 640 km from Guwahati, Namdapha was originally a reserved forest under the Assam Forest Regulation Act of 1891. It was declared a wildlife sanctuary in 1972, and later upgraded to a national park in 1983. Located in what is the Eastern Himalayan sub-region,



A male Hoolock Gibbon; the only ape species found in India is in Namdapha and (inset): Female Hoolock Gibbon

it is one of the richest biodiversity hotspots in India with a wide altitudinal range between 200 metres to 4571 metres above sea level. This altitudinal variation allows it the unique distinction of being a forest that is home to all four big cats – the tiger, the leopard, the clouded leopard and the snow leopard. Declared as a Tiger Reserve in 1983, it is also notably home to the Hoolock Gibbon – the only ape species found in India along with five species of the magnificent hornbills.

Just how mysterious this forest is, can be evidenced from the discussions and varied opinion on its very type. While all agree that it is an evergreen forest, some question its status as being a true rainforest. A rainforest is typically defined as a forest with between 250 and 450 cm of annual rainfall, with a small or by other accounts, an insubstantial dry season. They are the world's oldest eco-systems and are believed to contain more than half of the world's plant and animal species, though they occupy only between 5-6% of the earth's surface area. Some estimate the number of plant species variations to be as high as two-thirds of the planet's plant species. They are also referred to as the 'world's largest pharmacy' due to the plethora of medicines natural, and those that can be derived from them. Rainforests have been broadly categorised as tropical –



The Noa Dihing River, which emerges from Namdapha ONE INDIA ONE PEOPLE | July | 2016



Another view of the Noa Dihing River in Namdapha

those being near the equator, and temperate – between the tropics and the polar ice caps. Namdapha is labelled variously as a tropical rainforest, temperate rainforest and sometimes more specifically as a lowland evergreen rainforest. While decisions about titles are best left to experts, what is unquestionable is that it does meet the rain criterion and has large trees of species which are found in rainforests. For visitors, forests of Namdapha, along with the *shola* forests of the western ghats, is the closest one can come to experiencing what it would be like to visit the Amazon rainforest or others of its kind, along the equator.

Namdapha's distant location and the comparatively scarce information available about it and about what's in it, has quite often led it to be called 'India's secret rainforest', 'virgin forest' and other similar epithets. Situated in the Changlang district of Arunachal Pradesh, it is located a few kilometres away from the town of Miao. Misty hills herald its approach and the Noa-Dihing River coming from within its confines, stands also as its guardian moat.

The forest department has set up a roadblock indicating its official beginning, and on either side of the road – if one may call it that – is the definition of the word 'impenetrable'. A mass of vines, shrubs and small trees obliterate anything beyond the first layer of pruned trees and bushes that threaten to devour the road at any instant. Tall trees line the road as a guard of honour and double up as stanchions, and the thickets being the velour fastened between them that keeps the jungle at bay.



The Forest Inspection Bungalow at Deban

Somewhere along this way, the road finally drops all pretences and accepts its true identity as subservient to the forest it serves, and wearily takes on the title of a rough hewn path, with rough being the operational word. At its end, with an almost palpable sigh of relief, it opens into a clearing and deposits its charge – us, and for somedays, even paths like it shall not grace our feet. We have reached Deban.

Into the secret rainforest

Deban is amongst the very few such clear spaces in one of Asia's last and largest wilderness tracts. Situated at the edge of the forest, Deban is the entry point into the almost 2000 sq. km. of virgin forest area. Though a fully functional and operational site, facilities are rudimentary as compared to any other more popular (and easily accessible) national parks one may have visited. Set along the Noa Dihing River, it has several vantage points where time passes as effortlessly as the clouds over the Patkai Mountains in the distance. The Forest Inspection Bungalow offers accommodation of the basic kind, which when compared to further tent and camp accommodations, will soon seem luxurious.

At Deban, the forest guards and guides tell tales of the forest that leaves one spell bound. Many of these forest department employees with feet on the ground are of the Lisu tribe; who have lived in these forests for generations with the tribes themselves resident in eastern Arunachal and also neighbouring Myanmar. They do not speak of the forest as an entity that requires protection, but as a member of their family with its own needs that humans must fulfil and duties that it



A spider at Namdapha; this national park is one of the last biodiversity hotspots of the world



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An Alpine Black Swallowtail butterfly and (inset): Leopard Lacewing butterfly

has honourably discharged for as long as there have been Lisu in the forests. Perhaps the most striking of the tales, a nugget of information that puts the vastness of Namdapha into



An elephant laying a branch to help cross a stream at Namdapha

perspective, is the admission that not even forest guards have seen or known the entire forest. At their estimate, accurate information and some sort of credible research is available for only perhaps a third of the forest. Perhaps other officers have at other times visited and some accounts exist. Yet, daily or even weekly patrols around the entire forest are almost an impossibility.

It seems almost incredible and perhaps unprofessional and inefficient that those responsible for the forest have not trekked and walked the extent of their domains. That is, until you see the forests and understand what it is like to walk in one of them. It is like penetrating the impenetrable. And this has to be done in a short period of time, as in a rainforest, when it rains, it literally pours.

To go anywhere from Deban into the forest is essentially a trek. There are no motorable roads beyond Deban, and walking is the sole mode of commute, with an elephant to aid at times. There are some campsites established by the forest department which function as overnight halts for the few dedicated visitors whose love for forest and adventure trumps their material cravings. Some local travel companies offer packages of treks along these routes, between the camps, of different durations, but usually circuitous, beginning and ending at Deban. In the dry season, there would be paths cleared of vegetation that one could walk on, but, like the forest guards say, the jungle claims it back every monsoon,



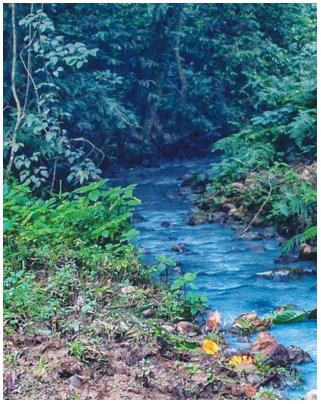
The road to Bulbulia

and every year in the short dry season, the work to clear a path must begin again.

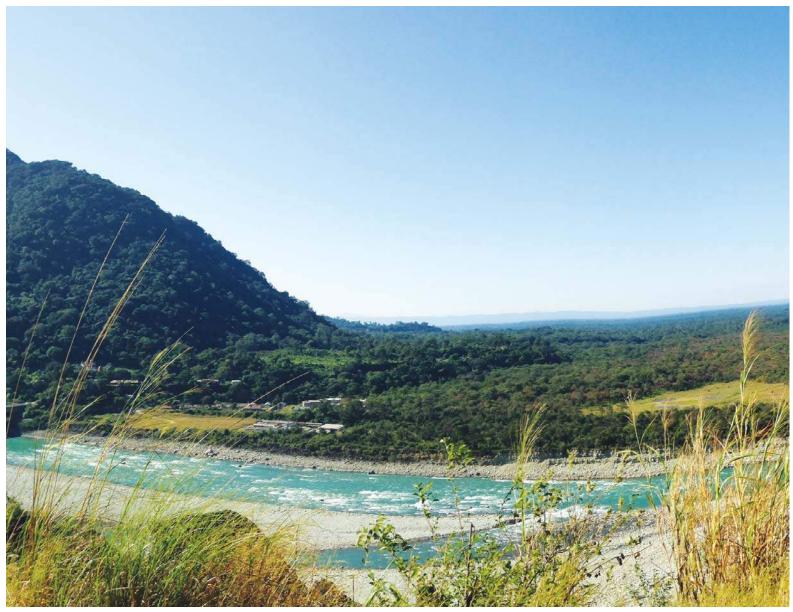
My visit in the relatively dry season of October-end and beginning of November was also not anywhere near as dry as one associates with the word 'dry'. The soil was as wet from moisture and the occasional shower as it was soft, like a carpet, albeit a living one, covered with humus (Latin for 'earth') which is a spongy bed of decomposing leaves, and other organic matter. A vital function the humus performs is keeping water cycles alive. It acts as a large natural sponge, absorbing the water received during monsoons, releasing it slowly through the year, through a network of streams and rivers that feed the major rivers that flow through the forest and then one with the Brahmaputra, to quench the lands beyond...

Gigantic trees abound everywhere and the path picks its way along and around them. The largest trees, soaring well over 60 feet form the main canopy, and take in the most sunlight. The second layer beneath it can withstand about 60-70 percent of the sun's brilliance. The third, even lesser, all the way to the shrubs at the ground, which need barely any light to grow and would wither if there was more sun. This means that every plant or tree depends on another to do its work to be able to live. As if understanding the necessity of having a symbiotic relationship to survive, even the path sometime gives up its crawling stride, ending at the trunk of one, and then after a small diversion through dense vegetation that wishes to hold you in its many tangles and keep you there, begins sheepishly from the other end of the trunk. Now imagine if there was no path. Shudder.

While rainforests are famed for their diversity, it is the flora and the fungal along with the earthworms, insects, butterflies and moths that one encounters that truly astonish. Butterflies the size of small birds, earthworms that could pass off as young ones of snakes, and insects that seem fed on steroids. In the grey light of perpetual shade, they seem at once eerie and impossible. And then along with this already blitzkrieg of an assault on the senses, the forest unleashes, what soon seems like its most abundant life form - the leeches.



Fire on water at Bulbulia! One can start a fire by utilising the natural gas seeping with the water



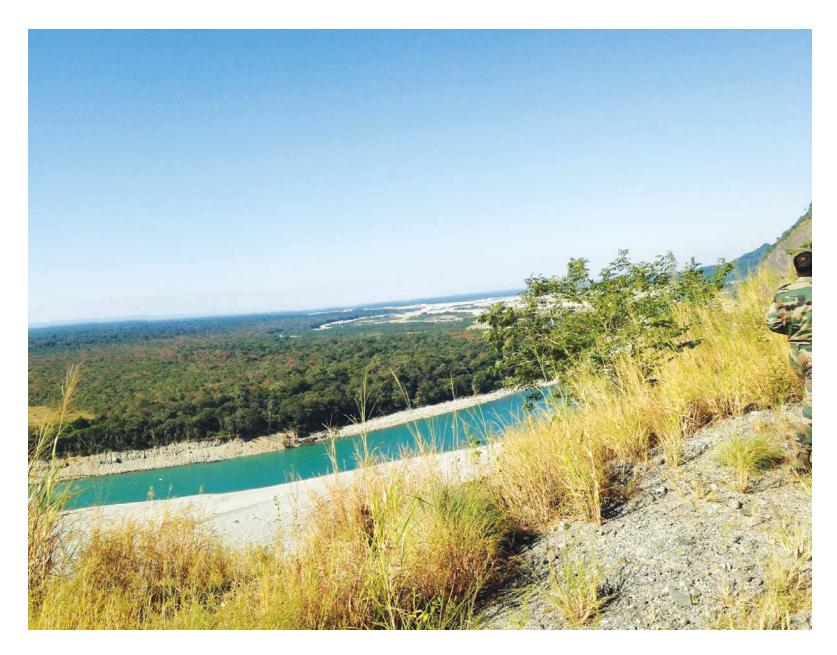
The Lohit River, enroute Kibithu, a major tributary of the mighty Brahmaputra

Littering every trail and every inch of earth available, the leeches are strewn across the trails like flowers in a Roman triumph. The presence of warm blooded creatures wakes the beast in them, and they rise up in unison like heads of a subterranean hydra. With the spirit and tenacity of the serpents in Medusa's hair, they are very adamant at wanting a suckle and squirt of fresh human blood through skin which is like paper when compared to their daily fare of other mammals. Their handicap of agility is made up by their persistence and flexibility, and once they stick to the shoe, they are able to squeeze through mere stitches and linings to feast on the feet. Specially made leech socks with no stitches for them to squeeze through allow the delay to swish them off the feet, as they make their relentless charge towards naked skin.

The trail I had set off on, led through a camp called Haldibari to the Hornbill camp, 9 km from Deban, and is so named as it is a homing ground for hornbills. While hornbills and their distinctive 'whoosh-whoosh' of flapping large wings could occasionally be heard and glimpses of the big birds were caught when not looking out for leeches, the frequency and population seemed to have greatly reduced from over a decade ago, when another group member had first visited.

The wildlife of the Namdapha National Park and especially key species such as the tiger and large birds like the hornbill are believed to be at risk due to both poaching and the tribal culture of hunting. Animals are believed to be shy of humans for the very same reasons, and in an already difficult to navigate and visually challenging terrain for animal spotting, the shyness makes it ever more so.

The trekking route past the Hornbill Camp leads to another campsite at a place called Bulbulia. It is a particularly endearing camp site overlooking an aquifer, and derives its name from the sound of the several sulphur-methane natural springs that sprout here. Tribals call the place 'Aji Polo' which means the place of bubbling hot water. Bulbulia with its many watering holes is well suited to spotting wild animals coming over for a drink, especially at night. However, its immediate attraction is



the possibility of starting a small fire on a make-shift stove of rocks by utilising the natural gas slowly seeping out with the water. The result is a miraculous fire on water display which is pretty to look at and quite a task to put out.

The trail from Bulbulia continues further to another camp called Firmbase, but this was the extent of my trek for the day and it was dark by the time I reached Deban. Night as it seems is the case with rainforests, comes on silent, swift wings and rather than descending unsuspectingly, which one quite expects, engulfs instantly. It takes a while to stop blinking and accept that it's not the eyes that are at fault, but truly the light has simply vanished. The last part of the journey in the forest, before breaking out at the river banks was walked in complete darkness, and one realises the power and adaptability of the human body, with the eyes accommodating and actually adjusting to allow for a vision I didn't know I had.

And though the stars and moon disappeared beyond the now imperceptible canopy, the fireflies were there to guide the way back home...

Some more secrets

The haze of distance clouds geography, no matter how easily accurate maps might be available. The kilometres that a place is away from wherever we call home, is directly proportional, in most circumstances to our knowledge and interest in that place. More so, if the places are not eulogised on social media and no Bollywood movies have been shot there. But then, the earth is a big, wide and wild place. Just how much can one keep track of...

To the north of the Changlang district is the Lohit district, named after the Lohit River – a major tributary of the Brahmaputra. The general area was once called the Mishmi Hills after the Mishmi people who live in the region, and the present name is believed by some to be derived from the Sanskrit *Louhitya*, meaning reddish or blood-coloured, and consists of the river valley and hills/mountains to the North and South. The Lohit district was in 2004 further divided into the Anjaw district which comprised the northern most part bordering Tibet (China) and Myanmar.

Well, all for the better as this allows for shocks, surprises



The Lohit at Parshurama Kunda

and downright awe, when one finally does start thinking of travelling in these distant places. And suddenly from the mist of ignorance emerge whispers of fantastical proportions, and you wonder why is it that you never heard of them before. Such it was in the eastern-most part of the country, when the search for the mysterious enchanted rainforest revealed some other well kept secrets – a legend and some history.

The secret pilgrimage

I have always believed that our wise ancestors - the *rishis* who are the progenitors of wisdom, realised and took seriously the need for human beings to travel. They also recognised the infinite human potential for laziness, and in their peerless wisdom devised travel itineraries and worked it, perhaps consensually across faiths and doctrines, as the one thing that all adherents should do. As a branding exercise, they called it pilgrimage. And it's a resounding success.

Not just in India, but across the globe, pilgrimage is the most popular reason for travel. The crisscrossing of India on various pilgrimage circuits is a particularly intricate weave, and seems designed taking into consideration weather and equal opportunity. Reasons for the pilgrimage are surprisingly repetitive across the locations – the purification of the spirit and the washing away of sin. Yet, the stories behind how and why this should happen are markedly innovative.

In the far Northeast, despite the strong Vaishnav connect in Manipur and the Mahabharata connections of Arjuna with Chitrangada and Ulupi and Bhima with Hidimba, mythological connections aren't the first thing the mind draws up. Somehow, natural beauty always trumps in that race. Perhaps it is the lack of really popular pilgrimages beyond the Kamakhya Shakti *peeth* of Guwahati that stills the mind from exploring this direction. Which, as it turns out, was a good thing as it came as a pleasant surprise to hear of a relatively lesser-known pilgrimage for us from peninsular India – the yatra to the Parshurama Kunda.

Parshuram is considered the sixth *avataar* of Lord Vishnu who is said to have lived during the last Treta and Dvapara *yugas* and is considered one of the Chiranjivi (immortals). He is considered the ultimate master of warfare which he learnt from none other than Lord Shiva. Son of one of the Saptrishis, Jamadagni and Renuka, Parshuram is known for his wrath, piousness and two incidents which have shaped his story – his killing of *kshatriyas* twenty-one times over, and matricide.

As per legend, Parshuram's father was killed by *kshatriyas*, and when he reached his home he found his mother who beat her chest in grief twenty-one times. Parshuram took a vow of vengeance and waged war with the *kshatriyas* and rid the world of them.

In another telling, Parshuram's mother Renuka is said to be such a devout lady that she could collect water in an unbaked clay pot which would be held together by the strength of her belief alone. However, on one such occasion, when she was collecting water for a ritual for her husband, a chariot of *gandharvas* flew over her and she lost her concentration for a moment, and the pot of unbaked clay dissolved into the river. Distressed, she just sat there not knowing how to show her face to her husband. Meanwhile, Jamadagni, through his powers, had already ascertained what had happened and he ordered his eldest son to slay his mother.

The son refused and the great *rishi* turned him into stone. The same happened with Parshuram's other brothers. Finally, it was the youngest, Parshuram's turn and ever-obedient, he beheaded his mother. Pleased, Jamadagni offered boons to his



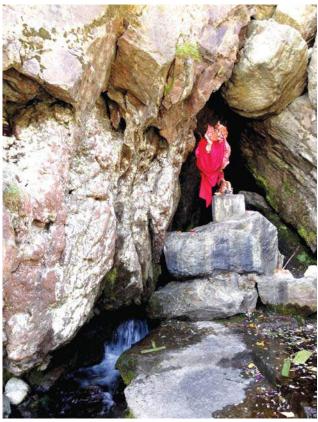
The Parshuram Temple at Parshurama Kunda

son and Parshuram wished for his mother and brothers to come back to life and not remember anything that had happened. While the family, through the grace of the boons came alive again, Parshuram was culpable of the sin of matricide.

Some versions of the tale speak that the axe used by Parshuram to kill his mother stuck to his hand. Jamadagni suggested that Parshuram do penance and travel the pilgrimage spots of India and bathe in their sacred waters. Through this, he assured his son, the sins would be washed away.

Parshuram, at his father's suggestion, made all the major holy pilgrimages, but the axe remained glued to his palm. Then destiny took him to present Arunachal, and in Lohit district, in the Lohit River, Parshuram washed himself, and the axe came off and sank into the river! Thus, he was cleaned of his sins and the place this happened is the Parshurama Kunda. In memory of this, on every Makar Sankranti - when the Sun begins his northern sojourn in the month of January, people gather in large numbers at the Kunda, which unlike a lake in most places, is a flowing river, with the belief that like Parshuram, they too would be absolved of their sins.

As per other stories, it was the sins of killing *kshatriyas* that Parshuram washed away at this Kunda before setting-up the place as a sacred site. The priest at the Parshuram temple spoke of how the 'mela' (fair) at Makar Sankranti was getting bigger every year and not just local people, but others too



A small shrine at Parshurama Kunda

would come from far and wide to pay their respects. Another local also spoke of how the Kunda was originally at a site under the current river flow, and the massive Northeast earthquake of 1950 changed the old site completely. Yet, mysteriously, massive boulders have embedded themselves in a circular formation in the river bed, thus forming another Kunda in place of the old one.

The walk to the Kunda is a fairly long one with a steep descent of stairs that take one to a rocky bank at a curve in the river, from where one gets a clear view of the Lohit valley as well. A perennial mountain spring joins the Lohit at this point and in a small niche, is kept an idol of the Chiranjeevi Parshuram. Would you think that he still comes here for a dip now and again? Perhaps disguised as one of the many mendicants who find their way here when the Sun enters the sign of Capricorn? I guess we will never know. After all, every age must have secrets to reveal. Maybe ours is just to discover this place. Or re-discover, shall we say?

The secret road to China

What if I told you it is possible to drive to China? Within a day? Technically, it is possible to drive from Dibrugarh in Assam into China within a day. That there are no immigration posts to facilitate it is a separate matter altogether. The mountainous road that traverses through Lohit district winds its way into



Dawn at Kibithu

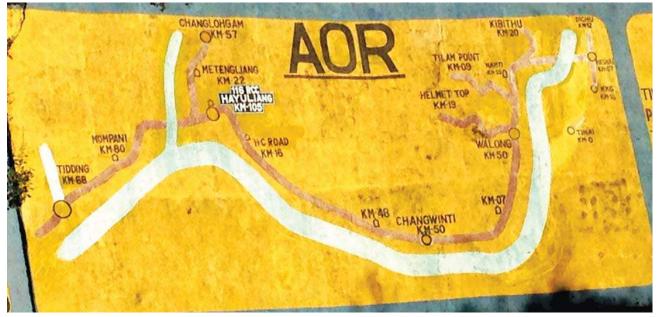
the Anjaw district and marches on through valleys of vistas, ever northward, pauses at a small village called Kaho, beyond which begins the Chinese province of Rima.

Unlike the high altitude border passes at Chushul in Ladakh, Nathu La in Sikkim or Bum La in Tawang in western Arunachal Pradesh, this road to Rima is quite convenient and a pleasant drive. In the days before the unfortunate war of 1962, some aged locals reminiscence, there used to be two major towns – Sadiya on the Indian side and Rima in Tibet. Post war, the borders lost all translucence and turned opaque, effectively an invisible wall.

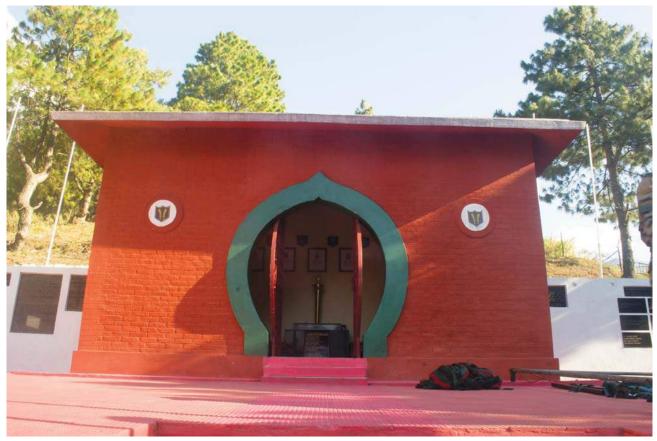
Lore has it that this road to China was coveted by many. Early records claim that it was a matter of interest for Muhmmad Bakhtiyar Khilji – the general of Qutubuddin Aibak in the 13th century and then some centuries later, the Muhgal Emperor Aurangzeb, with aspirations of emulating his ancestors of the line of Genghis Khan and ruling over provinces of the Qing empire, sent Mir Jumla into Assam with intent to find this route to China. His expedition was thwarted however, by the Ahoms of Assam against whom he met with limited success, and had to finally recall his troops from the Northeast.

This road of perhaps 300 km into China, at a point that is much closer to the major cities of China, offers sensational possibilities for the future. That future, however, sleeps under the shadow of much pain and humiliation from the events of the Indo-China War of Walong of 1962, which India lost and where, as the Time Magazine summed up eloquently in its November 1962 issue, "...Indian troops lacked everything. The only thing they did not lack was guts."

In October 1962, the Chinese exposed the unready state of the Indian military and the heroism of the Indian soldiers of the Kumaon, Sikh, Gorkha and Dogra regiments, who during the war, until the fall of Walong, fought shoulder to shoulder in unknown terrain against an enemy whose numbers seemed



A road map to Kibithu



The Hut of Rememberance, Walong

stretched to infinity. They say it is not uncommon to find remains of the war even now and fragments, live ammo and even scraps of uniforms can be found amidst the rocks, hidden in tall grass and amongst the pine trees of the mountains.

On the road to Kaho, one passes the former battle zones of Walong and Kibithu and another – Tilam – is just a short distance away. At Walong is a Hut of Remembrance that salutes the indomitable spirit of the Indian soldiers. Another plaque and memorial stands in the Namti plains outside Kibithu towards Kaho, and there is one also at Tilam. Reaching these areas today requires special army permissions. In fact, entering Arunachal itself entails having Inner Line Permits.

At Walong, a memorial that details the battles and blood asserts the Indian Army declaration that 'Walong will never fall again". Yes, it should never have to fall to war again. Nothing should. But perhaps, just maybe, if we manage to find a way



paved with goodwill and cooperation, the small stretch between Kaho and Rima could be a smooth ride that connects and unleashes the potential of two ancient civilisations. Imagine then, the possibilities...

The writer is a media professional and freelance writer.





Jog Falls to Murdeshwar, all in a day!

Northern Karnataka has much to offer from Jog Falls to places like Gokarna, Karwar and Murdeshwar. **Disha Shetty** visits two of these and tells us how to do so on a shoestring budget, without compromising on the experience.

OW about starting your morning on a hill station, watching the water gush down edgy rocks at a menacing pace, and ending your day having *gadbad* ice cream at a restaurant overlooking a massive Shiva statue against a background of serene, blue Arabian Sea? I just described a trip to the famous Jog Falls and the temple town of Murdeshwar in Northern Karnataka, that can be done in a short time on a shoestring budget.

Northern Karnataka is full of less explored places that must be on your wish list if it isn't already. I discovered that covering Jog Falls and Murdeshwar is possible in just one day, without the need to spend extra on staying anywhere! Jog Falls is the second highest waterfall in India with a drop of around 830 feet, after Nohkalikai Falls (1100 ft) in Meghalaya. While the best months to visit the place are around the monsoon, you can visit as late as December too, like I did, and gaze as the Sharavati River splits into four distinct streams of water.

Reaching Jog Falls

You can take a train to Honnavar railway station and from there a bus to Jog Falls. The buses from there are frequent and travel fast. Those with motion sickness though, beware! As the bus goes through the *ghat*s with sharp bends, a queasy stomach could be your biggest challenge.

The falls themselves are a sight to behold. Streams of sparkling water with foam at the surface, rolling off dangerously sharp rocks make for a majestic view. You can tell apart the four different streams that have been named rather evocatively as, Raja, Roarer, Rocket and Rani.

For those wanting to get closer to the waterfalls, there are 1,400 steps built to allow you to get to the bottom. Even as Jog Falls attracts a large number of both Indian and foreign tourists all year round, it has also gained notoriety because of the number of people who commit suicide here.

The place is well maintained by the Government of



Karnataka, and there are a number of private and government stay options if you are keen on spending more time here. My recommendation however would be to head to Murdeshwar after spending half a day at Jog Falls.

Shiva, sea and sand!

Reaching from Jog Falls to Murdeshwar is a matter of two hours and changing two buses. Locals are helpful and ready to guide, and travelling is hassle free considering both the places are known tourist destinations. The moment you reach Murdeshwar, even before you can catch a glimpse of the shore, the cool breeze caressing your face will tell you that your destination is not too far. The majestic Shiva statue can be spotted from a distance and is surrounded by pristine blue sea.



The Arabian sea that forms a perfect backdrop to the temple

There are lots of places around here where you can eat and keep your luggage by paying as little as ₹ 50. So, drop your bags and soak in the towering temple. The 20-storey tall *gopuram* in front of the Shiva statue has a lift that will take you to the top and give you a panoramic view of the place.

The temple, though full of people, does not have serpentine queues where you will spend hours. You can take your own sweet time to admire the stone structure and the water body surrounding it. For those interested in water sports, there are banana water rides and opportunities for boating too.

For lovers of sea food, I have one warning. While most restaurants serve sea food, the ones right opposite the temple do not. You will only find that out when you are seated and ready to place the order, as I did. One thing that you must try in this part of Karnataka is the *gadbad* ice cream, which is multiple scoops of ice cream in a tall glass topped with dry fruits, *falooda* and cherry. It tastes just as divine as it sounds.

Murdeshwar has a railway station and you can take a train



back to either Mumbai or in the southern direction to Mangalore. With two great spots off your list and that too without spending too much and using the local transport, don't you think this is a trip you must try?

The writer is a young journalist who has recently discovered the joys of travelling.

FACE TO FACE with Sri Mata Amritanandamayi Devi

"We need to strengthen the family structure. As mothers, women will have to play a significant role in this. This age calls for a reawakening of motherhood."

Sri Mata Amritanandamayi Devi has proved that Motherhood, in its ultimate sense, has nothing to do with bearing a child, but with totally offering one's self to others. Rightfully called 'Amma' throughout the world, she sits for hours together or for more than a day, ready to even forego her bodily needs in order to bring a smile to the faces of the suffering, embracing, accepting and consoling the aching hearts, regardless of their caste, creed, age, nationality or gender. Though born in Vallikkavu, a remote coastal village of Kerala, Amma, is also accepted as the Universal Mother by her devotees throughout the world.

From restoring spiritual values and traditions to its glory, to providing total medical care for all, with stateof-the-art facilities including free treatment or with reduced fee-charges offered to the poor, immediate disaster relief measures during natural or man-made calamities, value oriented educational facilities through the finest educational institutions, offering food, clothing, shelter and old age pensions to the poor, scholarships and self-employment opportunities to the needy, and to preserving the nature and environment at its best, indeed, the range of her services encompasses all, bound not to any boundary.

Reproduced here, are a set of answers given kindly by Amma, in Malayalam, during her visit to Chennai, to **Meera Krishnankutty**, translated by Amma's senior most disciple, Swami Amrita Swaroopananda:

Mother, throughout your life, you have embraced and comforted millions of people. Your motherly embraces began when you were only 14,

at a period when even speaking to strangers was considered a great sin. How did your family and society respond to this unconventional gesture?

Amma: Even as a little girl, I always experienced a spontaneous stream of love flowing out of me to the entire creation. I never thought that "this self" is different from the totality. With that experience within, I always felt a motherly affection towards everyone and everything.

Initially, due to ignorance of spiritual principles, the

family did raise a lot of objections. They were concerned about "their daughter's future" and their own reputation. However, once the family realised the truth, they offered their full support. The villagers also became very loving towards me.

My mother believed girls shouldn't run. Girls were supposed to walk slowly. If they ran, they were said to be of bad character. They were supposed to speak so softly that even the walls would not be able to hear them. They shouldn't burst out in laughter. When guests came, they were not supposed to show their faces. Until the guests left, we wouldn't be able to come out of our room. There was no bathroom inside the house. So, until the guests left, we had to endure.

Men in the family were given more importance. Girls were not allowed to sit even in the presence of their younger brothers. Food was first served to the men. Only if there were leftovers, would the women get to eat. Men were not supposed to wash their clothes or dishes; that was a woman's work. There were so many restrictions on women. In this way, we were conditioned to respect men. This was the culture of my village. It was in this environment that I was brought up.

So, when I began to receive men and women without any difference, it created a big hue and cry in my family and in the surrounding villages. It was totally unacceptable. Initially, I had to face severe challenges, but I didn't budge because of my firm conviction, trust and realisation that, "Love alone can transform."

Intolerance is a word that is very commonly used these days. Isn't it also an expression of impatience, Mother?

Amma: Intolerance and impatience have been hallmarks of humankind for centuries. They have existed in varied names and forms in every nation and among all classes of people and sections of society. The difference is only in degree. The human mind cannot exist without such negative tendencies. So, the mind itself, along with all its weaknesses, must be transcended.

In today's world, when people, individually or as a group, blame others as "intolerant," they are forgetting that they, too, are intolerant in many ways. They forget how they have also been prejudiced and narrow-minded on many previous occasions. Tolerance occurs only when you are able to put yourself in the other person's place and love him as you would love yourself. When you reflect the pain and pleasure of the other like a mirror – at that point, all intolerance disappears.

People from all over the world come to you for solace. Amritapuri is a mini global village, where different languages are spoken, and people of different nationalities stay together, eat together, work together and live together, with perfect mutual understanding. Mother, what is the magic formula for this wonderful phenomenon?

Amma: This is the magic of love – a magic born out of understanding that life and love are the same. It is as simple as that. Love is closer than the closest. However, out of ignorance and greed, we are distancing ourselves from this most sacred love. Unfortunately, love has become scarce in today's world. Love is the food that nourishes everyone. When

love becomes the main component of all that you do, unity and understanding spontaneously arise.

Mother, every day you listen to thousands of distress stories. Can we say that your charitable activities and humanitarian services are an immediate response to this?

Amma: Yes, almost all the humanitarian activities undertaken have been a response to a need, when immediate attention became a demand to an impending situation. However, generally speaking, the strong urge to love and serve humanity has been a spontaneous expression of the experiences that I underwent and the harder realities of life I saw around me.

Misery manifests in different names and forms, but basically it is deep grief. Humanity, all over the world, is suffering from this disease known as grief. It comes as sadness, anger, hatred, greed, jealousy, poverty, lack of love, fear, insecurity and so forth. However, the common name for all these various symptoms is grief. Grief is the hallmark of today's world.

The village where I was born and brought up was comprised of about 10 acres at that time. In my childhood, if anyone had even a quarter of an acre and five people asked if they could build a hut on it, the owner would allow them to do so because people had faith in each other. The landowner knew that, if necessary, the people would vacate. So, there were about 70 small huts spread throughout the village. When I was about eight, I started going to these houses to collect leftover vegetables and rice gruel to feed our cows and goats. At that time, a family typically had 10 to 12 children. In one home, I would see the children clinging to their mother and crying because they were so hungry. The mother would be trying to console them, but she herself would be in tears. Seeing such things I would become very sad. In another house, I would see children who were well-fed, playing happily.

The pain that some people were experiencing was unbearable for me. I asked Nature, "Why do some people have to undergo so much suffering and others do not? Why are people so unhappy?" Then the answer came from within that their suffering was due to their previous actions. But there was an additional revelation. I realised, "If a person falls into a pit due to carelessness, is it right to just call it his *karma* and walk away without helping him out?" I then knew that my mission in life and my responsibility was to love and serve people.

I would take food from our house and give it to those in need. The elderly would tell me their sorrows. I would wash their clothes, give them a bath, feed them the food I brought, console them and help them in whichever way I could, even though my family would scold me. Thus, I spontaneously began to listen to people's sorrows and to console them by wiping their tears. However, I also realised that spiritual teachings alone will not work without appeasing people's hunger and taking care of their basic necessities. That is how all the charitable activities unfolded.

Mother, many generations of men and women have been coming to you. Have you noticed any remarkable changes in the attitude of the present generation, towards life?

Amma: Certainly, there are changes in perspective between today's men and women compared to those of the previous generation. In fact, there is a widening gap, perhaps, almost an unbridgeable one. People who belong to this younger generation, children in particular, are definitely well-informed, technically knowledgeable and intelligent. However, there is a serious degeneration in their values. The current generation also seems to be emotionally immature. They are more attracted to the fancy glittering world of fantasies. There is nothing wrong with such dreams. Indulging in such things is required to a certain degree. But currently, people are going overboard. Information technology and spiritual values should go hand in hand. Otherwise, our much treasured and glorious family structure and the love that always strengthened it will gradually disappear, which will culminate in social and cultural disintegration.

We need to strengthen the family structure. As mothers, women will have to play a significant role in this. This age calls for a reawakening of motherhood. Parents, especially mothers, should make it a point to train their children in spiritual values. Let our children build their future on the foundation of our age-old values and traditions. Let them learn to love and respect their parents, elders, teachers, nature and fellow human beings.

To desire and to be ambitious is fine. However, our life and the actions we perform should be in tune with nature, with the universe, because this is the substratum of everything. The most serious challenges in the history of mankind – the climate change and global warming – are nothing but the result of humanity's callous actions and endless greed, forgetting Nature and its laws that govern us.

The floods that hit Chennai due to incessant rains during the end of November 2015 had been the severest disaster that Chennai encountered, since Tsunami. Almost immediately, the *Math* began its relief operations. Mother, but what was the first thought that came to your mind when the news was flashed?

Amma: My heart reached out to the people. I felt their pain. The immediate question, of course, was how to help them. We called our hospital in Kochi instantly, and asked them to send emergency-care ambulances, medicines, doctors, paramedics, etc. Then we instructed our Chennai, Coimbatore and the other branch ashrams and institutions in the area to send volunteers, food, clothing and other necessary items. Compassion is the first and last step in resolving a problem.

Mother, atrocities against women and children are still on the rise. Is there no solution to this? What do you see as the family's role in preventing this crime?

Amma: Everything good and bad that you see in a person's character originates from home. Children are the greatest observers. They see, hear and feel everything so deeply. So, the family atmosphere, the conversations you hold, the bond you have, the quality of thoughts you think, your gestures, the way you treat each other, your guests, animals, plants... Every single thing that happens there, even things that seem insignificant, counts. It is all creating an impact on the child's mind.

Parents are always telling their children, "Study! Study! Study!" They need to be just as focused on ensuring that their children are cultivating values. They need to teach their sons – both with words and through the example of their lives – that women are not inert objects for men's pleasure, but embodiments of God. They need to teach their sons to respect women and protect women, to be kind and understanding.

However, women are stronger than they think. Women need to awaken to this truth. Unfortunately, women have been conditioned to think they are weak. When an elephant is a baby, the mahout ties it to a tree. It pulls with all its might, but it cannot break free. Eventually, it accepts this situation and stops struggling. Later, when the elephant is fully grown, it can be tied to a small tree with a thin rope. It could easily free itself by uprooting the tree or breaking the rope, but because its mind has been conditioned by its prior experiences, it doesn't even try. Women should realise their inner strength and courage.

In essence, men should be trained to have kindness and understanding, and women should be trained to have strength of heart. But this will take time. Until the situation changes, women should consider travelling in groups of at least three, especially at night.

'Amala Bharatham' is a project of the *Math* which commenced much earlier than the Swachh Bharath campaign. How did it all begin?

Amma: The Amala Bharatham campaign was started in September 2010, and we have also been working in close association with the Prime Minister's 'Swachh Bharat Abhiyan' ever since 2014.

It has always been my dream to see India clean like the West.

Just as any other project, Amala Bharatham was born out of an inner urge to help create awareness among our people to live a clean, healthy life, more attuned with nature. Of course, the task before us is huge.

However, the first step of anything is compassion. Then determination and other necessary resources will come. Whether it is with regard to cleanliness or anything else connected with our daily life and living conditions, the first step in helping others is imparting awareness. Inspite of taking regular medication, if a diabetic continues to eat sweet food, his blood sugar level will still increase. So, diet control and lifestyle modification are just as important as medication.

I remember an incident that happened in one of the villages we adopted. Initially, we taught a group of people how to build their own toilets. Then we left the actual building to them. When we revisited these villages, we saw that the villagers were not using the toilets. They would just open the door to their new bathrooms, look inside as though they were visiting a temple, and then close the door and go to the nearby lake to relieve themselves as usual.

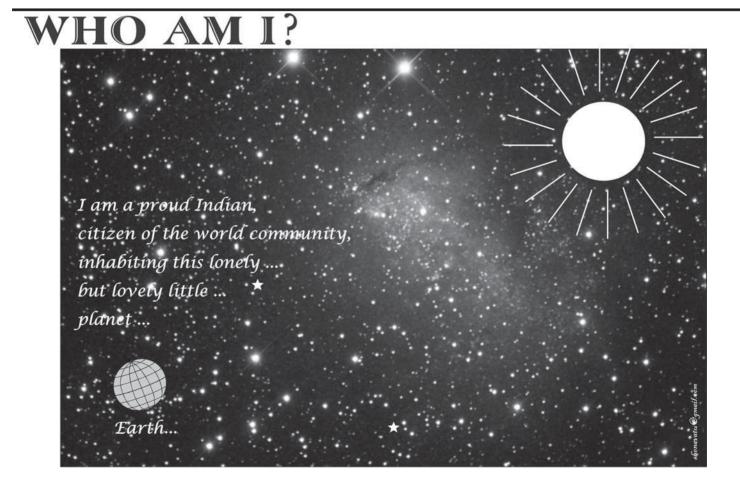
When we saw this, we started educating the villagers, explaining that open-defecation leads to water and soil pollution, which further contaminates food and leads to all kinds of parasitic infections. This helped create the muchneeded awareness in the community, and they started using the toilets.

Providing basic amenities alone is not enough. We have to painstakingly help such people make these habits a part of their daily life.

We live under constant fear of unrest these days. What would be a possible solution to restore peace?

Amma: Fearlessness comes only when we live a life rooted in *dharma*. What is *dharma*? Adhering to the laws of the universe is *dharma*. If a political party has an absolute majority, it can change constitutional laws. Nevertheless, the laws set by the universe are unalterable. If we go against them, the universe may remain patient and silent for some time, but it will not, forever. It may be difficult to establish complete peace in the external world.

However, we can definitely experience perfect peace within if we tune our mind with the universe, with the cosmic laws. Learn to be loving and respectful to Nature and your fellow humans. Coexisting in harmony with Nature, our fellow human beings and the mysterious aspect of life, will bring us more and more peace and harmony within and without.



The Meghalaya approach

(Continued from page 22)



A jalkund, which is a small water harvesting structure

The Meghalaya approach to rainwater management

Meghalaya, being the main beneficiary of the Southwest monsoons, receives very high rainfall, higher than most parts of the country. The rainfall varies in the state, from more than 12000mm in the southern slopes, to close to 2000mm in the northern slopes. However, the rainfall is only for 6-8 months in a year, leaving the dry months with lots of water scarcity problems, since there is 90% runoff. And due to the distinct topographical and geo-morphological conditions of the state, there is high surface runoff to the neighbouring plains. In total, rainwater discharge from 11,667 sq km of catchment area in the state drains into the Brahmaputra Basin, and from the rest 10,650 sq km, into the Barak Basin. It is anticipated that the state requires about 15 BCM (Billion Cubic Metres) of stored water annually for meeting the requirements for drinking water, irrigation and other livelihood generating activities such as fisheries.

With all the factors, including the uncertainty of rainfall, the water availability situation in Meghalaya is grim. Increasing water availability throughout the year in the state by providing storage facilities through rainwater harvesting have been given importance, and various projects have already been taken up by the state government under its Integrated Basin Development and Livelihood Programme (IBDLP), which has been implemented in a mission mode by the Meghalaya Basin Development Authority (MBDA), Government of Meghalaya. As a start, the government has initiated programmes like jalkunds, Multi-purpose Reservoirs (MRs) and roof-top rain water harvesting as tools to implement rainwater harvesting in the state.

Partnership with India Water Foundation

India Water Foundation (IWF) is a development partner of the MBDA, in managing water resources in the state. Inputs

from IWF have helped in the adoption of Integrated Basin Development and Livelihood Programme by the MBDA, which also looks after water and agriculture sectors in tandem with respective government departments.

As a result, the trends in water conservation and rainwater harvesting are gradually undergoing change for the better because mechanisms are in place in the form of jalkunds (small water reservoirs), MRs and roof-top rainwater harvesting, to provide water during the lean period.

The Jalkund Programme

Jalkunds are small water harvesting structures that supplement the crop water requirement during the dry season when numerous types of crops may be grown. It also helps expand the irrigation coverage, especially in areas which are on the fringes of existing command areas. The Jalkund Programme is restricted to a total command area of 10 ha (hectares). It has become a boon especially to many small and marginal farmers in the remote parts of the state, who would otherwise not be eligible for most of the irrigation schemes.

According to broad estimates, over 600 jalkunds have been created to help create irrigation potential of 1942.46 hectare, and these schemes are being implemented through the District Water Resources Councils (DWRCs).

Viewed from a broad perspective, jalkunds are small microrain water harvesting structures to preserve the water resource that is available abundantly during the monsoon and for utilising them during the lean periods. Initially, attention was focused on type-I jalkund structures, because this type of rain water harvesting was deemed suitable in location where there are negative spaces and the topography allows for the surface runoff/ natural drainage to be blocked by an impounding structure. The water impounded from these structures can then be conveyed by gravity to the required locations through canals or pipe.

Subsequently, only 5-10 type-II structures of jalkunds were implemented on a model basis. These structures are suitable mostly on hill tops, where the collection of rainwater is insitu. These structures can vastly help in converting *jhum* cultivation areas. The target area for these structures is more localised as the storage of water is completely dependent on the rain water that falls directly from the sky. The coverage will also depend on the size of the pond and the crops planted.

The avowed objective of these jalkunds is to achieve the goal of providing access to irrigation water to every farmer in the state by the end of the 12th five-year plan. In view of various agro-climatic zones in the state, different types of jalkunds are being implemented based on the need assessment of the farmer, in consultation with the DWRCs.



A roof-top rain water collection point

Multipurpose - Reservoirs (MRs)

Multipurpose Reservoirs are water resources structures that will cater to the different water needs of the community such as drinking and domestic water, irrigation, fisheries, livestock and micro-hydel, etc., wherever feasible.

Roof-top rain water harvesting

Realising the importance of having adequate and clean



(Continued from page 21)

Lagaan (2001) has a poignant sequence where the song *Ghanana ghanana ghana* has a prelude that sets the mood, followed by this song. The villagers, unable to farm because of severe drought, begin to sing and dance for joy when they see the clouds floating towards their village. But not a drop of rain is forthcoming and their faces fall. The sequence has the physical reality of the expected rains, the symbolic reality of dark clouds bringing in the rain,s and the metaphorical reality of hope followed by despair. The lyrics, the melody and the tone of the song added to the beautiful orchestration and



The sensuous *Aaj rapat jaye toh humein na uthaiyo* from *Namak Halal*

water supply in Health Centers across the state, the Government of Meghalaya is proposing to construct rain water harvesting structures in Primary Health Centres and Community Health Centres located all over the state. The water will be stored in 50,000-1,00,000 litres tanks, which will supplement the daily domestic water requirements. It is anticipated that this programme will cover schools and colleges, institutions, offices, etc., in due course of time.

India is already a water-stressed country, moving towards becoming water scarce. Water scarcity has many negative impacts on the environment, including on lakes, rivers, wetlands, and other fresh water resources. This Meghalaya approach can prove to be a milestone in resolving the country's water crisis.

 $\ensuremath{\mathsf{Dr}}$. Arvind Kumar is the President of India Water Foundation and a renowned water activist, having provided new impetus to



the water movement in India. He is also member of the Meghalaya State Water Resources Council. He holds a PhD in Defense Studies, and has published over 350 plus research articles in recent years on national, regional and international issues in reputed journals. He was conferred with the 40th Matri Shree Media Awards in April 2015. He was also conferred the Triveni Award for his contribution in the field of environment and water in May 2015.

choreography are in complete harmony. The lyrics were by Javed Akhtar and the music was a creation of the A.R. Rahman magic.

The most sensual song-dance number presented in heavy rains and shot with blue as the dominating colour is Sreedevi's sizzling and steamy number *Kaate nahin kat the din ya raat* – in Shekhar Kapoor's *Mr. India* (1987) where without revealing skin or gyrating her hips and bust, or any *latka-jhatkas*, wrapped in a wet sari, hair flying in the air, eyes half-shut, she dances gracefully and beautifully to the tunes of Laxmikant-Pyarelal, on lyrics penned by Javed Akhtar lip-syncing to the voices of Kishore Kumar and Alisha Chinai. One can get glimpses of a fire suggesting the burning passion that underlies the song. This film remains a cult classic and this song-dance number is one of the reasons for its archival life.

Incidentally, Mira Nair's acclaimed film *Monsoon Wedding* had no rains or rain songs to celebrate the season. Interesting.



Shoma A. Chatterji is a freelance journalist, film scholar and author. She has authored 17 published titles and won the National Award for Best Writing on Cinema twice. She won the UNFPA-Laadli Media Award, 2010 for 'commitment to addressing and analysing gender issues' among many awards. She is currently Senior Research Fellow, ICSSR, Delhi researching the politics of presentation of working women in post-colonial Bengali cinema 1950 to 2003.

POLITICS

Towards a Federal Front?

Is a Federal Front in India, an idea whose time has come? India may have a federal structure, but a strong Centre can and has bulldozed the state governments, says **Prof. Avinash Kolhe**. Hence, the growing clamour for a Federal Front may not just be a flash in the pan, he reasons.

P now the heat and dust of the assembly elections in five states has settled, and respective players have gone back to their drawing boards to devise strategies for the future. Ideally, this should have been the beginning of a new chapter.

But before that, let us quickly look at the political scenario of India today. The historic decline of Congress continues. The party, with its image of corruption cast in stone, remains intact. Out of the five assembly elections held in April 2016, Congress could retain power only in Pondicherry, a tiny state, which is of no significance in the politics of the country.

These results brought home one more aspect of today's political picture. We are once again becoming a unipolar polity, where there is one national party dominating the discourse. This was the picture in the early years of our republic which is popularly known as One Party Dominance System (OPDS) as was christened by late Prof. Rajani Kothari. The OPDS started breaking down from 1977 onwards. But it is widely feared that we are perhaps back to that situation, although this time it is the BJP which dominates.



Mamta Banerjee wants to revive the idea of a Federal Front

A Federal Front?

This dream run of the BJP has put the regional satraps on high alert. They know by now that for their very survival, they need two national powerful parties where they can play one against the other. Regional leaders like Mamata Banerjee, Chandrababu Naidu. Javalalithaa and few others, will sup with anybody and everybody for their political

interests. Now they see the decline of Congress and they also see that there seems to be no chance of its survival in the near future.

This is perhaps why Mamta Banerjee has thrown up a new idea while she was being sworn in as the chief minister. On 27 May 2016, while she was taking charge as the chief minister of West Bengal for the second time, she announced that time has come to float a 'Federal Front' in our country. This announcement assumes importance as it was made in the presence of many non-BJP, non-Congress leaders and chief ministers like Arvind Kejriwal of Delhi and Nitish Kumar of Bihar.

The idea of a 'Federal Front' in a way is not new. In the early 1980s, the then chief minister of Andhra Pradesh late N.T. Rama Rao had floated this idea which was promptly supported by the then chief minister of Jammu and Kashmir Dr. Farooq Abdullah. Both had suffered a lot at the hands of a powerful central government headed by Mrs.



Jayalalithaa, a powerful regional satrap

Indira Gandhi. Though it was quite a sensible idea, it was not taken further and it died a natural death.

The idea behind federal front is to have a club, an association of leaders of regional parties who continuously experience discrimination by the Centre. The purpose of the Federal Front would be to maintain the federal structure of our Constitution. This is indeed noble and badly required. But then as we all know, politicians do not think in terms of long term game. For them what matters is the here and now.

Before one gets into the nitty-gritty of the issue, let us understand quickly the idea of a federal system. When our Constitution-makers were debating the form of our future government, they had two options to choose from. One was the unitary model, popularly known as 'British model', suitable to small and homogenous countries. Then there was the federal model, also known as the 'American model', which gives tremendous powers to the confederating states. Both were unsuitable to Indian conditions. Hence we borrowed the best of both these models and created the Indian political system, which is closer to the American model. Another practical consideration that had weighed on the minds of Constitutionmakers was that by the Government of India Act, 1935, some sort of a federal system was already in place in India.

This is how we adopted the federal system of governance, which basically means two sets of government. One government at the central level and other, at the state level; both directly elected by the people. To avoid clashes between these governments, we have a list system. There is the 'Union List' which has subjects under the purview of the Union government, and there is the 'State List' which has subjects under state governments. In addition, we have a third list, 'Concurrent List' where both can operate.

When reality dawned

This arrangement is ideal on paper, but in real life, the picture is not so rosy. In reality, the Central government more often than not, functions like a big brother and keeps breathing down the neck of many state governments, especially if it's a government of some other political party. This reality of power politics lay hidden from public glare till 1967. That year, the DMK came to power in Tamil Nadu. Within two years, the DMK realised that the Central government of Congress party is making its life miserable. It further realised that a state government is quite powerless in our scheme of things. Utterly frustrated, in 1969, it appointed a committee led by Justice Rajmannar to study the issue of Centre-State relations. The Rajmannar Committee unambiguously recommended a better share of financial resources to the states, abolition of article 356, and financial autonomy to the states.

As the DMK realised, so did the Shiromani Akali Dal (SAD) in Puniab. In 1973, the SAD had held in annual conference at Anandpur Sahib and resolved to ask for more autonomy to the states. The central government ignored these initiatives. It is argued by many scholars that were the Centre to address even a handful of issues mentioned in the Anandpur Sahib resolution, the separatism in Punjab of the 1980s would have been easily put down. Then in 1977, the Left Front came to power in West Bengal, which too demanded abolition of article 356 and more financial autonomy to the states.

It can be seen from above that many regional parties were dead against the overbearing attitude of the Centre. This picture however, drastically changed in the 1990s, when Congress started crumbling down and the BJP was yet to fill in the gap. This gap was filled in by many ambitious regional parties like SP (Samajwadi Party), BSP (Bahujan Samaj Party), TDP (Telugu Desam Party), TMC (Trinamool Congress), etc. This is how the 'era of coalition politics' dawned in India. During 1996-98 we had the United Front government of nearly a dozen parties. Then during 1998-2004, we had the BJP-led National Democratic Alliance (NDA) in which the BJP had 182 MPs and the remaining numbers came from dozens of regional parties. Even from 2004-2014, the Congress-led United Progressive Alliance (UPA) had followed the same script. Congress could win nearly 200 MPs and balance could be chipped in from the regional parties.

These regional parties demanded and got their pound of flesh. A Chandrababu Naidu here or a Jayalalithaa there could get what they wanted from the Centre. No wonder the debate and the demand for Federal Front was not heard during the coalition era. This would have



Nitish Kumar, a powerful non-BJP, non-Congress Chief Minister

continued but for the miraculous victory of BJP in May 2014 general elections in which the Modi-Shah duo managed to win 282 MPs. Though today the BJPled NDA is in power at the Centre, it is really a BJP government that is ruling the country.

Today, while on the one hand we notice the end of the coalition era, on the other hand, we also notice the revival of the Mrs. Indira Gandhi era, when she could dismiss non-Congress state government without any valid reason. Unfortunately, the Modi government is following her footsteps. Look at the mess in Arunachal Pradesh and Uttarakhand. Despite a comfortable majority, state governments were dismissed for petty political gains. This is perhaps why the likes of Mamta Banerjee must have felt the need to revive the idea of a Federal Front, where like-minded regional parties could come together and ensure that the central government does not usurp their legitimate power. In that context, the idea of a Federal Front must be welcomed. But how it actually gets played out in the political arena, remains to be seen. At the regional level, each satrap possesses a king-size ego. This



may come in the way of a Federal Front.

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Free to trade?

India is part of many international trade agreements, and continues to negotiate with other agencies and countries. **Shalini Bhutani** gives us a sense of what these trade

agreements are.

O trade means to buy and sell goods and services. Indians are free to do that within the country, subject to the national laws made on this subject under the Constitution of India.

Article 301 of the Constitution of India states:

Trade, Commerce and Intercourse throughout the territory of India shall be free.

(This freedom is restricted by the conditions imposed by Articles 302-305.)

But what rules apply when India has to trade across international borders? For example, if Basmati rice grown in India is to be sold in European countries, or when professionals from India are to provide their services to the United States, or when a foreign mining company wants to establish operations in India? The international law is constantly developing in this area. Globally, the nature of trade and investment liberalisation is undergoing continuous changes.

Previously, India was more inclined towards protecting its interests as a developing country, and maintaining its voice as that of the Global South. Today, aside from continuous autonomous liberalisation (that has reduced border protection through reduction of import duties, easing foreign investment norms, etc.), India is now more inclined to shift its own trade and investment policies along global lines. Towards that end, India has made rapid advances in bilateral/regional free trade agreements (FTAs), and bilateral investment treaties (BITs).

These engagements are all interwoven and multilayered, and their collective effect impacts all aspects of our

in significant lives But not all ways. these agreements before the come national Parliament, the decisions as around these FTAs/ BITs, etc., are made in the exercise of executive power of the Centre. The negotiating texts are not made open. This

forecloses possibilities



S The WTO headquarters in Geneva, Switzerland

for a social impact assessment of these trade agreements. Non-transparency also makes it difficult for people to engage in any dialogue with negotiators.

Article 253 of the Constitution of India states:

Notwithstanding anything in the foregoing provisions of this Chapter, Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body.

Trade rules depend very much on economic and other interests as well as on the diplomatic relations that countries already have, and want to have with each other. A country can impose an embargo – a partial or full prohibition of trade, with a particular country for political reasons as well. A typical example of that is the United States embargo on Cuba.

The history

The first set of global trade rules

are contained in the General Agreement on Tariffs and Trade (GATT). These came into existence after the Second World War (WW II). GATT was signed by 23 nation states in Geneva on 30 October 1947, and came into effect on 1 January 1948.

Though the idea behind GATT was to aid in the economic recovery after WW II, it became a way to institutionalise rules for global trade. It was hoped that trade would be a means to maintain peace amongst nations. Yet, trade relations can themselves create hostilities amongst nations, particularly, if and when trade agreements are violated.

Then WTO

The original text of GATT is the foundation of what is now the WTO (World Trade Organisation) framework. The WTO established on 1 January 1995 is today the world's largest intergovernmental organisation, where countries decide the rules for trade. It is headquartered in Geneva, Switzerland.

WTO's many agreements form the basic set of rules for global commerce

for its 162 member countries (as of March 2016). These are agreed upon through discussions called 'rounds' of trade talks. The current ongoing round is the Tenth Round, which began in Doha in 2001. The WTO negotiations, where India had often taken a socalled "pro-development" stance, have been facing an impasse since 2008. At the last meeting of WTO at Nairobi, Kenya, in December 2015, there was no consensus amongst member-states to take forward the Doha Development Agenda. Instead, developed countries that feel trade liberalisation is going slower than they expected, are now both adding 'new issues' to the WTO agenda, and also looking outside WTO to further their trade agenda. For this, FTAs/BITs become an important tool to make trading partners go beyond the WTO.

More bilaterals

Outside of the WTO, India is also in several new agreements, either signed or in the making between different countries (see Table). These are being negotiated either at the bilateral (with one other country) or at the plurilateral level (between many countries, more than two but less in number than the multilateral WTO).

One of the most important 'mega regional' that India is in talks for is the 16-country Regional Comprehensive

GATT/WTO terms:

MFN – Most favoured nation; this implies that the host country will give the same treatment to all its trading partners. If one country is given better terms of trade, then all others will also be given the same favourable terms. NT – National treatment; this means treating foreign and local traders/ enterprises/persons equally. In other words, it implies that a government cannot treat locally-produced goods and foreign-produced goods differently.

India & the key trade agreements it is part of:				
No.	Treaty	Status	Since	
1	General Agreement on Tariffs & Trade (GATT)	Member	1948	
2	World Trade Organisation (WTO)	Member	1995	
3	India-Singapore Comprehensive Economic Co-operation Agreement (CECA)	Signed, in force	2005	
4	EU-India Bilateral Trade & Investment Agreement (BTIA)	Interest to resume talks	2007	
5	India-Korea Comprehensive Economic Partnership Agreement (CEPA)	Signed, in force	2009	
6	India-Malaysia CECA	Signed, in force	2011	
7	India-Japan CEPA	Signed, in force	2011	
8	India-Australia FTA	Talks ongoing	2011	
9	Regional Comprehensive Economic Partnership (RCEP)	Negotiating	2012	
10	India-ASEAN FTA	Signed, in force	2014	

Economic Partnership (RCEP). The RCEP aims to reach the high standards of some of the other large and ambitious FTAs being negotiated in the Asia Pacific region, such as the Transpacific Partnership Agreement (TPPA). It thus becomes 'WTO-plus'.

Apart from the FTAs, India is also readying itself for a new generation of BITS. The relevant departments of Governement of India (GoI) are not only working to liberalise trade in goods, but also in services, investments and other areas of economic co-operation. When the economic reforms were rolled out in 1991, India had designed its first Bilateral Investment Promotion and Protection Agreement (BIPPA) template. Last year, the Ministry of Finance, GoI, prepared and made public a draft Indian Model Bilateral Investment Treaty text to replace the old one.

Conclusion

The general trend is to push for 'free trade' and encourage foreign investors. This is done essentially at the back of large corporate interests. For they want the market forces to play their course, without any tariffs (also called import/export duties) and quantitative restrictions. It is about creating the ultimate open market.

But words like 'free' and 'open' can be misleading. Freedom to corporations does not automatically mean that the well-being of people is achieved. Unfettered trade also has ecological implications in its being based on relentless exploitation of natural resources. The ultimate test is what the 'free trade' agreements mean for the many freedoms of ordinary people, other than simply being free to trade. Public policy has to balance the diverse interests that sit across the table in trade deals. The future of our societies and that of the planet depends on it.

Shalini Bhutani is a legal researcher and analyst based in Delhi. She works and publishes on a wide range of issues including how free trade and its rules impact communities and conservation. She was a faculty member at the Centre for Environmental Law, WWF-India, and is now guest faculty on legal and regulatory affairs at various universities. She is the legal counsellor for the Apna Beej network and supports the Indian Alliance for Seed Sovereignty. Pre-



viously she has worked with several NGOs, both as Navdanya) and international (GRAIN). She can be contacted at: emailsbhutani@gmail.com

WILDLIFE TRADE

The game of extinction

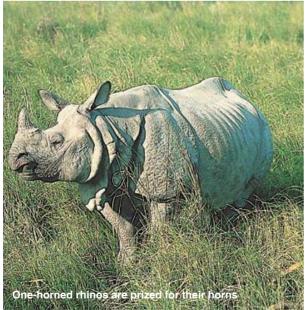
The year 2016 has been declAared by the United Nations Environment Programme as the year to cut down on illegal wildlife trade. **Dr. M.A. Haque** gives us shocking figures of this illegal trade, and the reasons for it.

INCE middle the tho of 19th century, environmental degradation became rampant due to industrialisation and discovery of new processes and materials. The year 1962 proved a milestone when Rachel Carson published the book Silent Spring. The book resulted in one after another chemicals being banned. Incidentally, ten years later, in June 1972, world leaders from 113 nations gathered in Stockholm to discuss about ways to reverse the degradation. The Conference on Human Environment started on 5th June and resulted in the formation of the United Nations Environment Programme (UNEP). Since 1973, the anniversary of the Stockholm Conference - 5th June is celebrated as World Environment Day (WED), to create awareness about the environment. For each year, a special theme is selected by the UNEP. For 2016 the theme is "Zero Tolerance



Elephants are very heavily poached in Asia and Africa

for the Illegal Wildlife Trade". Reasons are obvious. The booming illegal trade in wildlife products is threatening the



biodiversity of the Earth, pushing species towards extinction.

The illegal trade

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) studied the trade for the period 1998 to 2007. Examination of about 53,000 trade data brought out the fact that during that period, 35 million animals were traded, of which

30 million were wild species. More important, experts are of the opinion that compared to legal trade, volume of illegal trade is much more. That brings extra pressure on the organisms. The traders are in a hurry to deliver the goods. Also, they conceal the organisms to avoid detection. As a result, about 60 to 80% of the organisms die in transit. Just as an example, in November 2013, Thai Customs officials intercepted more than 1000 turtles which were concealed in the luggage of air passengers. On a single day, four suitcases were intercepted with 470 turtles. Recently, in April 2016, one person was sentenced for five years in USA for smuggling turtles. He had tied 51 turtles to his body, inside his garments. In several countries there is a huge market for turtles to be kept as pets. It is estimated



A tiger in the wild – for how long?

Earlier, this structure was used to capture tigers, leopards etc., alive in forest

that during 2000 and 2014, about 65,000 turtles were caught illegally in Mexico alone. Thailand's Tiger Temple was in news in June, this year. People used to visit the temple to take selfies with the Tiger cubs. But officials found 40 dead cubs in the temple freezer! Also, temple monks were caught fleeing with tiger skins.

Elephants, tigers, rhinos, leopards, gorillas and sea turtles are well known examples of animals which are poached. In 2011, a subspecies of the Javan rhino went extinct in Vietnam: in the same year, western black rhinos vanished from Cameroon. Great apes have disappeared from Gambia. Burkina Faso, Benin and Togo. About 3,000 wild great apes are lost every year, Orangutans are the main targets. Lesser-known targets of illegal trades are helmeted hornbills and pangolins. Pangolins are considered the most illegally trafficked mammal. Also, wild orchids and timber like rosewood are smuggled.

Let us look at some hard facts. Between 2010 and 2012, 100,000 African elephants were killed for their ivory. Since 2009, African Savannah elephants have declined by 60% in Tanzania and by 50% in Mozambique. An estimated 170 tonnes of ivory was illegally exported from Africa between 2009 and 2014. A report about Gabon's Minkebe Park says that since 2004, about two-thirds of its elephants have been killed there. Gabon supports more than half of wild African elephants, about 40,000. Rhinos are poached for their horns. According to the International Union for Conservation of Nature (IUCN), 1,338 rhinos were killed in 2015. In South Africa alone, 1,175 rhinos were killed. It is estimated that python skin worth one billion dollars reaches Europe every year through clandestine routes.

If we look at the value of illegal wildlife trade, it is between 15 and 20 billion dollars annually. It is estimated that during the last ten years, more than one million different animals were taken from the wild. Now scientists use a special terminology – "Empty Forest Syndrome" – to signify the absence of large animals from the forests. Illegal and unreported fishing is another area of concern, accounting for 11-26 million tonnes of fish each year, causing depletion of fish stocks, price increase and difficulties for fishermen.

The Indian scene

India with almost all possible types of ecosystems, has very high

biodiversity. With only 2.4% of the land, India supports 7-8 percent of total biodiversity. That is why it is included in the list of 'Mega-diverse nations'. But many Indians are not concerned about this wealth and they are destroying the habitats as well as the wildlife. Cheetahs were present in large numbers in India, but it is now no more. The last two cheetahs were killed in 1947. The Asiatic lion, which now exists in the Gir area of Gujarat, used to be present in much larger areas. People hunted them to the extent that only few were left. Luckily, the Nawab of Junagarh prohibited lion hunting and secured them. Presently, the population is about 500, but in only one area. There too, they are not safe. Poachers do target them whenever they get an opportunity. They are killed by poisoning and their body parts are removed. As far as tigers are concerned, India has the highest population in the world.

Originally, tigers consisted of nine sub-species. Three have been exterminated completely. One of the remaining i.e., the Royal Bengal Tiger is present in India and adjacent Bangladesh and Nepal. Poachers regularly target them for their skin, bones, teeth, nails etc.

(Continued on page 51)

YOUTH VOICE

Sums, similes and synthesis

The tenth standard board exams are a seminal landmark for any Indian student. A young student, **Gauri Kedia**, fresh from her board rigours, describes the journey for us. Humour, it appears, is an important ingredient of the board prep!

The before...

I should really study more.... I mean, I put in more work for my mock exams. It's 3:23 pm now, so I'll start at 3:30 pm on the dot. It's easier to calculate the number of hours I study that way. Two seconds later, it's 3:38 pm. Oh well, I guess I'll have to start at 4 pm then. I wonder idly if they have a prize for procrastination. Like so many things, the board exam stress is overhyped. I'm underwhelmed at the lack of stress I'm feeling. Cue the guilt factor: I should really put in more work. This is literally the worst time to have a burnout. Just my luck, though I'm fairly sure I'm not the only one experiencing this. Granted, I probably studied less than most for the mocks as well. I did fine in those, so the actual thing should be a breeze. Probably. Maybe. Hopefully? Enough with the doubts. I'll be fine. Won't I? I will, definitely. My shoulders feel heavy with the imaginary angel and devil on each: the ultimate conflict between watching yet another episode of the show I've been hooked onto, and opening my biology textbook. For once, Homeostasis prevails over Death note, and I sigh as I turn to page two hundred and something.

An hour and a half later (an actual hour and a half, not by my internal clock), I snap the book shut. I'm impressed, I didn't get distracted at all. Well, once when my phone beeped, but I only looked at it for a few seconds. I deserve a break. And I know just the thing. A few episodes later, it's 6:30 pm. I need fresh air. I'll be back in around half an



Gauri Kedia

hour, anything from fifteen minutes to almost two hours. (Hey, I get to decide what "around" means when I say it, don't I? I'm the one saying it.)

Anyway, after sometime in the latter end of 'around' half an hour, I come back to be greeted by being asked how many hours I've studied today. This makes me irrationally annoyed (it's not my fault I'm stressed), and I bite back the sarcastic retort that comes to my lips as if by reflex. See? Diplomacy.

The during...

Overrated. Totally and completely overrated. The days go by in a blur of sums, similes and synthesis. The stress while writing the papers isn't any more than it would be during a regular exam. What's really somewhat intimidating is the official, formal exam hall atmosphere. The exams themselves go fine. I suppose I'll find out how they've really gone when I get the results in August. Gulp. As a rule, I refrain from discussing the papers at length, because; a) I'd rather

not find out how many answers I've got wrong and b) it's like doing the paper all over again, and once has definitely been bad enough. There is often a day or two between exams, which, while useful for revision, causes the exams to be strewn over about three weeks downright painful. It's somewhat hard to believe I'm giving arguably one of the most important exams of my school life; in fact, I almost forget this several times (just kidding, mom) and find myself relaxing with a good book rather than learning the main themes of 'The Merchant of Venice'. Though, in my defense, it was the last exam, and I'd already prepared for it earlier. Besides, there's only so much you can rote learn for an IGSCE English literature exam.

I remember how I'd counted down the days to the start of the exams, though, not with excitement as is usually associated with the activity, but rather with dread. Already the fear of getting the results is thrusting itself into my consciousness. August doesn't seem that far away on this side of May. First things first – get through the exams themselves in one piece, worry about the results later: June and July will be a much needed respite.

The after...

It doesn't feel like they're over, like tenth grade is over. Even when I wasn't studying, the reminder of papers yet to come occupied the back of my mind. Even after a couple of days, it remains, making its presence felt, and putting me in a mild state of confusion for a few seconds at a time. The one thing I'm really looking forward to is the sheer amount of time I'll have – more than I know what to do with. It'll be nice to not have to stick to a schedule, or have to remember which enzyme works where. Of course, these two months are only a stop gap; I'll be feeling that same gut clenching fear I tried to suppress just before I entered the exam hall, in August. In retrospect, though I didn't study nearly enough (compared to others, at least), the exams went rather well, but I'm careful not to get too optimistic in case I turn out to be deluded and my grades are not what I expect them to be.

I've found that my thoughts circulate in a vicious cycle. Step 1: Try not to worry. Step 2: Start worrying about why I'm not worried about my grades. Step 3: Realise that worrying will have absolutely no effect on my grades.

The game of extinction

(Continued from page 49)



A few years back, the Sariska Wildlife Sanctuary lost all its tigers. A lot of noise was generated as Sariska is close to Delhi and most foreign dignitaries are taken to Sariska when they visit Delhi. Tigers from other areas were reintroduced here.

In the year 2015, 69 Indian tigers died due to various reasons. Poaching was an important factor, as 25 were poached. Madhya Pradesh alone lost 16 tigers to poaching. The trend for 2016 is even more disturbing. As many as 28 tigers were poached by April end. Rudyard Kipling's story about Mowgli and Sher Khan made the Indian tigers of Maharashtra and Madhya Pradesh internationally famous. A recent film on the story has proved very successful. Earlier, a TV serial on the story was

seen by millions. But even in those forests, the tigers are not safe. On an average, a tiger dies there every 10 days. Tiger skin fetches high price in Europe and other areas, while the bones, teeth, nails etc. are in great demand in China and a few other countries. Tiger bones are used to brew 'tiger bone wine', and the meat is sold as a delicacy. The teeth and claws are sold as charms. Recently, when tiger poaching attracted more attention, the poachers started targeting leopards.

Experts say that one leopard is killed every day.

Rhino is another target for poachers in India. The one-horned rhino exists only in Kaziranga and adjoining areas. Between 2009 and 2015, 61 rhinos were killed there. In April 2016 when Prince William and his wife Kate Middleton were in Kaziranga, poachers killed a rhino and cut out the horn. Rhinos are killed for their horns since they fetch very high price in certain countries, including China. Indian elephants are also under attack for their ivory.

In India, wildlife is killed for bizarre reasons too. For example, some people sacrifice owls during Diwali. Owl is considered the vehicle of goddess Lakshmi. People kill the owl so that the Repeat steps 1 through 3, indefinitely. Healthy, isn't it. At some point, I stop at step 3 and stay that way. It takes just about all my willpower, but somehow I do it. My results will be here in August, whether I like it or not. But August is a long way away (at least, that's what I keep telling myself) and I'll burn that bridge when I get to it.

Gauri Kedia is a 16-year-old student living in Mumbai. Her passions are reading and writing.

goddess will be stranded at the house where the 'sacrifice' is performed. Another example is of snakes. People generally kill all kinds of snakes although only four or five varieties of Indian snakes are poisonous.

Even plants are vulnerable due to over-exploitation and deforestation. Globally, 14,781 species of higher plants have been classified as threatened. For India the number is 385, while Ecuador accounts for the highest number (1848).

It is well established that wild ecosystems and organisms also boost tourism. Large numbers of tourists from inside the country and outside visit Indian forests for wildlife. Tigers and lions are the two main attractions. When white tigers were present only in India, they attracted maximum tourists. For Uganda it has been established that one live Gorilla brings \$1 million per year through tourism. Innumerable examples of similar nature can be cited from all over the world. That is why this year the WED theme focused on this subject so that people may realise the value of wildlife.

Dr.M.A. Haque retired as Director (Scientific) from the Ministry of Environment, Forests <u>& Climate Change, in</u> 2010. He writes



2010. He writes regularly on environment, wildlife, tourism, lifestyle etc., in Hindi, English and Urdu. He has published five books and two more are on the anvil.

Helping the drought affected

People affected by severe drought need long term help. Just the advent of rains will not ease their woes, as they have to re-build their nil stocks of food and fodder. It's the government's duty to provide them substantial interim relief.

Of course, rains are

welcome as water

sources will start

filling up again and

the farm and dairy

animals will be able

to get drinking water

and grass and leaves

more easily, but as far

as food for people and

dry fodder for animals

are concerned, these

shortages will persist.



Bharat Dogra is a Delhi-based freelance journalist who writes on social concerns.

HERE is a widespread feeling that justice has not been done to the people affected by serious drought conditions in many parts of the country. This was also supported by verdicts of the Supreme Court in mid-May, which while giving directions for improved relief, also pointed out the glaring inadequacy of the relief work taken up so far.

There have been some indications that the Union Government has been reluctant to implement the wide-

ranging and far-reaching recommendations of the Supreme Court. The reports appearing from several parts of the country still indicate that the relief effort in drought affected areas is far from adequate, and the distress suffered by people in areas like Marathwada and Bundelkhand is very acute.

However, there is also an additional apprehension that with the advent of the monsoon rains, some of the already inadequate drought relief work may be further curtailed. This may happen because in the narrow view of bureaucracy, with the advent of normal rains, drought conditions are over! Such a view however ignores the

reality of most drought affected villages. Having lost two or more crops in the recent past, these villagers do not have any stocks of food grains, pulses and oilseeds in their homes, and there is also no stock of dry fodder or *bhusa* obtained from crop residues. In these conditions, when rains come, the shortage of food and dry fodder obtained from crop residues will still persist, till at least one normal crop is harvested. Even if this happens, food grown on their fields will become available only after about five months or so. However, even if weather conditions remain favourable, drought affected farmers will be short of funds to meet the costs of farming, and may have to borrow at a very heavy interest rate. Thus, even if they get a reasonably good harvest, a significant part of the earnings will be lost in paying back debts.

Due to this and several other reasons, the distress of badly drought affected villagers including landless persons will persist for a long time, even after the advent of rains. Of course, rains are welcome as water sources will start filling up again and the farm and dairy animals will be able to get drinking water and grass and leaves more easily, but

> as far as food for people and dry fodder for animals are concerned, these shortages will persist.

> In fact, in many drought affected areas, it is becoming clear that this not a onetime drought, but rather a part of a much wider phenomenon of adverse and erratic weather in the ongoing phase of climate change. As such, the earlier expectation that one bad weather year is likely to be followed by a good year, may no longer hold true. In other words, we need much better efforts of adapting to climate change. So on the one hand, we have to campaign for the continuation of adequate relief work till as

long as it is needed, but in addition we also need to campaign for a longer term, well planned effort for protection from more intense and prolonged droughts as well as heat waves, and overall better adaptation to climate change. This means that the government has to allocate much more resources for ecofriendly and organic agriculture, drinking water, watershed regeneration projects and protection from disasters. This also means that many-sided efforts including land reforms should be strengthened to reduce poverty and inequalities, as poor and deprived households are most vulnerable at the time of prolonged droughts and other disasters related to local factors as well as climate change.

COLUMN / ECONOMY

Building our human resource

India has a dismal education record, with one of the lowest education inequality indices. It's time we addressed this more adequately.

THE Human Resources Development (HRD) Ministry, we are told, is on the verge of declaring a new education policy; this will come 30 years after the second Education Policy of 1986. The committee to frame the policy has submitted its report in May. T.R.S. Subramanian was the chairperson of the five-member committee entrusted with the responsibility of integrating feedback collected by the HRD Ministry through grassroots and national-level consultations on multiple themes.

Families obsess about education in India and rightly so, but perhaps without fully appreciating why it is critical and why a national policy on education is even more so. The word democracy derives from the root 'demos' which means people. We are the world's largest democracy that chooses its government at the local, state and central levels. We are also the world's largest pool of illiterates, semi-literates, and have one of the highest educational inequality indices. Of the rural families, only 3% have graduates according to the recent Socio Economic and Caste Census. So how do we choose? Choice implies information about options and ability to process that information rationally. We are also building a market driven economy to give consumers many choices. How does a consumer decide what is good for his/her wellbeing? Developing rational impulse and ability to access evidence and analyse it is central to the purpose of modern education. Yet, the world's largest democracy spends less as a percentage of its GDP (Gross Domestic Product), on public education than non-democratic states like China! These aspects of education have been lost in the crisis of education for most gainful employment, what we call 'professional education' in India for best salaries. That kind of education creates pools of skilled people who are now only used as disposable wheels in the production process. Skills are certainly needed, but no more than scientific attitudes, to fashion a progressive society.



is an independent researcher. She was earlier a Fellow at NMML, Teen Murti.

This is an extraordinary discrepancy. And this has a historical trajectory. At Independence, between 12-14% of population could read or write. This literacy was biased in favour of men and upper castes. A national policy for education was tabled only in 1968. The first National Policy on Education was adopted twenty years after Independence. The Kothari Commission as it is called, becomes a watershed, calling for a revolution in the sector, with its emphasis on primary education, adult education, and significance of state funding ."*There is of course one thing about which we feel no doubt or hesitation: education, science-based and in coherence with Indian culture and values can alone provide the foundation – as also the instrument – for the nation's progress, security and welfare*".

It draws attention to primary education to fulfill Constitutional Directives, the need to increase per capita expenditure on education, and need to raise allocations in proportion to GNP (Gross National Product) from 2.9% (1966) to 6% (1986). Total expenditure on education was only about 3.5% of GDP in 2015. The proportion of resource allocations recommended never did materialise. But in 2009, the Right to Free and Compulsory Education Act was passed spelling out the duties of governments, local authorities and parents, to enable children between the ages of 6-14 to get educated in a neighbourhood school. It was a fundamental right finally enforceable in a court of law. In the background of persisting shortages of good quality government schooling. it required private schools to admit poor students and meet the deficit in revenues by increasing fees for other students or by other means. This was met with resistance from private schools who found various pretexts, including the difficulty of increasing fees in poor neighbourhoods. The people are therefore waiting to see a call for increase in allocations and new strategies to improve quality of public education at all levels.



Monsoon Precautions

YOUNG

Rain comes as a welcome relief from the summer heat. Children and grown-ups alike enjoy the rains and plan wet outings and monsoon trails. The monsoon is no doubt fun. However flooded roads, thunderstorms, power failures and, worst of all, diseases, take the joy out of the season. Here are a few tips to enjoy a stress-free monsoon.

Keep Mosquitoes at Bay!

When the rains arrive, the mosquitoes come, too. It is their breeding season. They multiply quickly and in great numbers.

How can you keep them away?

- Use nets for your windows, doors and your bed.
- Use repellent creams. switch on electronic antimosquito devices.
- Don't keep open containers of water lying around. Stagnant water is a great breeding ground for mosquitoes.

By keeping away mosquitoes you keep away malaria and dengue.

Protect Your Feet!

If you love to wade through water, make sure you have no cuts on your feet or legs which may act as a gateway for leptospira

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bacteria to invade your body and cause leptospirosis. The urine of dogs and rats contaminate the flood water. Closed boots offer more protection than sandals. When you get home, wash your feet



thoroughly, preferably with a little antiseptic added to the water.

Keep Dry!

If you are prone to viral fever, take extra precautions in the monsoon. Avoid getting wet in the rain, and if you do, as soon as you reach your destination change into dry clothes and shoes. Avoid using the air-conditioner.

Visit the Doctor!

In spite of taking the best precautions you may fall sick. Instead of medicating yourself, go to your doctor for the right diagnosis and treatment at the right time.

Boil Drinking Water!

You may use a water purifier. However to make the water absolutely safe for drinking, boil and cool it. This is to ensure that you don't contract gastroenteritis and typhoid. The risk of falling prey to jaundice is also considerably lowered when you drink boiled and cooled water. Avoid eating exposed food sold on pavements, especially raw, unwashed cut fruits and vegetables.

Typhoid and jaundice (hepatitis) vaccines are available. Ask your doctor if you can take them.

Deadly Striker

The mantis shrimp is a marine crustacean which lives in the rocky seabeds of tropical and sub-tropical oceans. Its physical resemblance to the praying mantis and the shrimp has earned it the name mantis shrimp.

It is a powerful predator equipped with specialised spiny or hammer-like claws, with which it can strike a deadly blow at a speed of 23 metres per second to stun or dismember its prey. The force of its strike is akin to that of a .22 calibre bullet. Some larger species of mantis shrimp are known to possess the ability to break an aquarium glass with a single blow from their claws.

The animals are found in a variety of bright neon colours and patterns. They feed on fish, snails, crabs and molluscs.

No Room for a Needle



Once there lived a rich merchant. His life's mission was to hoard wealth. He was a miser on account of which he had no friends. The tailor who stitched his clothes for many years met with a sudden death. The merchant was also ailing. His relatives came to know that his end was near and started coming to see him. The tailor's son thought he would pay him a courtesy visit as his father had had a long association with him. He brought a needle and gave it to the merchant. He told him that his father forgot to take the needle to heaven and would he be kind enough to take it with him?

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The merchant took the needle assuring him that he would fulfill his wish.

The needle then became his major preoccupation. Should he keep it in his shirt? But it didn't seem a wise idea. Wouldn't the clothes burn when they would

cremate the body? Then he thought he would pin it up in his hair or may be in the bulge of his cheek. He realized that every part of the body would burn to ashes. So how on earth was he to take the needle with him?

The more he

thought about it the more confused he was. He then called the tailor's son and said, "I'm sorry I won't be able to take your needle to heaven." The boy laughed at this and said, "If



you can take all your riches to heaven why not a small needle?"

The merchant was ashamed. He realized his folly and donated all his wealth to the needy.

CURIOSITY

STORY

What is a patent?

A patent is an inventor's best friend. It is an exclusive right granted by law over an invention to its inventor for a fixed period of time. The invention can be a product or a process that provides a new way of doing something, or offers a new technical solution to a problem. A patent is a form of intellectual property. It prevents others from copying or using the invention without the

PITTENTED *******

inventor's permission. In exchange, the inventor has to fully disclose the details of his invention.

As long as the patent in in force, the inventor may or may not use his invention. If he does not do so himself, then he may give permission to another party to use or manufacture it for commercial gain. If the inventor sells the right to his invention, then the buyer becomes the new owner of the patent. The patent is generally granted for a period of 20 years and can be enforced only in the country in which the patent has been filed. If the inventor wants to protect his invention in more countries than one, then he has to apply separately in each country. After the patent lapses, the invention can be used freely by the public.

In India, patents are handed out by the Controller General of Patents, Designs & Trade Marks of the Indian Patent Office. It is headquartered in Kolkata.

PUZZLE

At a recent cookery competition, Chandni's chocolate mousse was not the last. Meenakshi only just managed to



avoid last place and came third.

The lady who baked a Black Forest cake bagged the first prize.

Shreya beat the lady who prepared trifle pudding and the lady who made cheesecake beat Naina.

Can you determine who prepared what and who won?

gnibbuq shirt	enieN .4	
Cheesecake	3. Meenakshi	
Chocolate mousse	2. Chandni	
Black Forest cake	1. Shreya	
Recipe	Prize Winner	
:19w2nA		

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MANOHAR AICH

The original 'Mr. Universe' (1912–2016)

ANOHAR Aich, the first Indian to have bagged the Mr. Universe title in independent India in 1952, passed away at the ripe old age of 104 on 6 June 2016, in his Kolkata residence. In 2015, he was given the Banga Bibhushan Award by the West Bengal government. He was the second Indian (after Monotosh Roy in 1951) to win any Mr. Universe title and the first Indian to win the title post-Independence. He did so in the 1952 NABBA Universe Championships. At 4 feet 10 inches (1.50 m) tall, he

was given the name "Pocket Hercules" because of his wonderful feats with his muscular and strong body that defied his height.

Born in 1912 in Bangladesh's Tipperah district in a remote village named Dhamti, Aich was interested in strength related sports such as wrestling and weight-lifting since childhood.

But destiny struck an ugly note when he fell victim to the dangerous illness called Kala Azar or Black Fever. Disciplined training in physical fitness saw him recover and regain normal health. He never felt his short height to be a liability in his strong man activities. This, despite the fact that the world of body-building was filled with tall and giant figures. In 1950, he won the Mr. Hercules contest when he was 36. In 1951, he stood second in the Mr. Universe contest. The next year, he was first in the Pro-

Short division of the NABBA Mr. Universe. In 1955, he stood third in the Mr. Universe contest. He stood fourth in the Mr. Universe contest in 1960 when he was 46. He continued to perform at body-building shows from 1960, and his last show was in 2003 when he was already 90. Aich was also a three-time Asian Games gold medalist in body building.

He started bodybuilding exercises such as doing pushups, squats, pull-ups, leg raises and traditional sit-ups. As a student in Dhaka, he attended the Rupal Byayam Samiti for physical exercises, and participated in shows titled Physique and Magic along with P.C. Sorcar, the great magician. He could bend steel with his teeth, bend spears with his neck, and rest his belly on swords.

Aich joined the Royal Air Force in 1942, yet continued his pursuit in body-building. Reub Martin, a British officer in the RAF introduced him to weight training. But Aich was placed behind bars for slapping a British officer as his strong reaction to the officer's remarks backing colonial oppression by the British in India. But his days in prison did in no way

> come in the way of his weight training, where he would spend hours in physical exercise. The impressed prison authorities even arranged a special diet for him.

> In 1991, he had also contested elections for the BJP and finished third, collecting over 163,000 votes. In 2015, he was given the Banga Bibhushan Award by the West Bengal government. When he turned 100 in 2012. he said that the secret to his healthy and ripe old age was his very simple diet comprising milk, fruit and vegetables along with rice, lentils and fish. In the entire 104 years of his life, he never touched alcohol, nor did he smoke. He once said in an interview, "I never allow any kind of tension to grip me. I had to struggle hard to earn money, but whatever the situation, I remained happy." His room is still decorated with posters, pictures and awards of his triumphs.

He leaves behind two sons and two daughters, his wife having predeceased him in 2002. His sons run a gym and fitness centre which their father helped them in when he was alive. He leaves behind an enriched history of umpteen triumphs and numerous achievements. Few can associate the achievements of this great 'little' man with the way he began his working life – selling coconuts on the streets. ■

- Shoma A. Chatterji is a freelance journalist, film scholar and author, who has won the National Award for Best Writing on Cinema.

AIR CHIEF MARSHAL HRUSHIKESH MOOLGAVKAR, PVSM MVC

The indomitable flying man (1921-2015)

RUSHIKESH Moolgavkar was born on 14 August 1921 in Mumbai, and was commissioned into the Royal Indian Air Force (RIAF) on 30 November 1940, in the rank of an acting Pilot Officer. He was sent to No. 1 Squadron in the war zone in Burma, flying Hawker Harts, and soon converted to Lysanders. The Squadron moved to Toungoo airfield for operations against the Japanese in January. Moolgavkar was lucky to be engaged in operations and soon established a reputation as a keen pilot who loved flying. In January 1945, while operating from Howe, near Cox Bazaar, he took off in a Spitfire and faced a sudden failure of the engine. He tried to force land on the beach. The aircraft rolled over and lay upside down in shallow water. He was hanging upside down still in his straps. He faced death due to drowning as the tide rose. Two British commandos noticed the aircraft and pulled Moolgavkar to safety. He suffered injuries in the spine and spent six months in plaster. He had completed 280 hours of operational flying in Burma. After return from Burma, he was posted to No. 4 Squadron flying Hurricane and Spitfire fighters.

Known for his flying skills, he was especially chosen to lead the fly past on our first Independence Day. Thus, Squadron Leader Moolgavkar led a formation of Tempest II aircraft just over the Flag Posts at the time our national anthem was

played and the national flag hoisted on 15 August 1947. Next day, he led a similar fly past, trailing the tri-colour, over the Red Fort.

He was detailed to attend the Staff Course at Wellington in 1948. He took over the command of No. 1 Operations Wing at Srinagar in September 1948 with the responsibility of planning and executing close air support to the Army during the battle for Zojila Pass. He flew many sorties himself under difficult conditions. His drive and leadership enabled the Air Force to provide effective air support for capturing Zojila. He was awarded MVC for exceptional gallantry and was one of the four MVCs awarded to the Air Force for Kashmir operations. In 1949, he took charge of the newly formed Air Testing Unit (ATU) which received four Vampire F3 fighter bombers. These were the first jet fighters in an Asian air arm. He was one of the earliest pilots to convert to Vampires. Promoted to the rank of group captain in 1951, he was Director, Operations, and went to France two years later to evaluate Ouragon planes. He had many firsts to his credit in his career: He led the first flight of Ouragon aircraft to India, was the first Indian to fly a

Mystere II fighter bomber faster than sound, and fly the Midge fighter which later became Folland Gnat. He went through the routine command and staff appointments and took over the command of Western Air Command in 1973, and was awarded PVSM in 1976 for distinguished service. He took over as Chief of Air Staff on 1 February 1976.

He was always known as a stickler for flight safety. He implemented several rules and reforms and brought down the accident rate in the Air Force to within International Safety Standards. During an official visit to Washington DC, he was presented the Legion of Merit for having "contributed immeasurably Indian-American friendship", thereby reflecting great credit upon himself and the Indian Air Force. Air Chief Marshal Moolgavkar was acknowledged to be an ace pilot throughout the Indian Air Force. He kept his flying status even when he was Chief of

Air Staff and flew until the day he retired. In his entire career in IAF he had flown 67 different types of aircraft including fighters, trainers, jets and proto types and right from the Tiger Moths and Hurricane to MiG-21 and Sukhoi-22s. He retired on 31 August 1978 and settled down in Pune. He dictated his experiences to his daughter Jyoti Rai, which has been published under the title of *Leading from the Cockpit: A Fighter Pilot's Story.* He was admitted to the Command Hospital on 29 March 2015 and passed away on 15 April 2015. He is survived by his son Dr. Prakash Moolgavkar and daughter Jyoti.

- Brigadier Suresh Chandra Sharma (retd.)

DR. TRUPTI SHAH

A true feminist (1962 to 2016)

"To live is the rarest thing in the world. Most people just exist".

– Oscar Wilde

R. Trupti Shah, a feminist and environmentalist lived her life to the fullest. A leading human rights and environmental activist, founder of Sahiyar, a women's rights organisation in Vadodara, Gujarat, dedicated to feminism and secular humanism, passed away on 26 May 2016 after a valiant battle against lung cancer at the young age of 54. Her untimely death has caused an irreparable loss to a wide range of social movements working towards social justice, distributive justice and gender justice.

Dr. Shah was full of life, hope, spirit, and was a great champion in mass mobilisation on gender concerns such as declining sex ratio, violence against women and girls, rights of women in the informal sector, sexual harassment at the workplace; environmental and livelihood concerns of poverty groups and farmers; democratic rights of dalits, tribals and religious minorities. Her Ph.D. in Economics from MS University in Vadodara was also on "Economic Status of Women in Urban Informal Sector – A study of Baroda City" in 2000. She made valuable contribution towards participatory action-research on themes such as dynamics of the women's movement in India, violence against women, women's work, women in the informal sector. household strategies of women in poverty groups, the impact

of fundamentalism and communal violence on women, and the impact of globalisation.

In 1993, when faced with devastating communal riots in India after the demolition of the Babri Masjid in Ayodhya, Trupti was at the forefront of peace keeping, peace-making and peace building efforts. She and her husband, Rohit Prajapati, had chosen to live not in caste-based residential societies of Vadodara, but in Tandalja in the outskirts of Vadodara, known as 'mini Pakistan', as it was predominantly populated by working class Muslims. Rohit as a trade union and environmental activist, and Trupti as a women's rights activist played a pivotal role in the formation of the Vadodara branch of PUCL (People's Union of Civil Liberties). During the Gujarat riots in 2002, Trupti and Rohit provided protection to the minorities and contributed towards the documentation of human rights violation, and deaths and destruction of property of innocent citizens during the riots.

Dr. Trupti Shah took up causes of people affected by the Statue of Unity project, the Garudeshwar farmers' plight, and the last petition filed by her was Vishwamitri Riverfront Development Project (VRDP). The last 18 months were extremely painful for Trupti as she suffered due to cancer, but

> that did not deter her from her spirited engagement. She was eagerly awaiting the court order for her petition demanding stoppage of VRDP, and the moment she was informed that the stay order for the VRDP had been obtained, she responded, "We have become serious about environmental and human rights issues, but what about women's rights?" and she went into a coma, and in a couple of hours, her body gave way.

Dr. Shah, in her four-volume Pictorial History of Women's Movement (both in Hindi and Gujarati), has adopted a story telling method in which 8 to 10 women raise issues, provide explanation and analysis, and discuss approaches to women's issues, taking episodes from history, epics, folklores, scriptures and oral traditions. The book provides a gender lens for 19th century social

reform movement, the first half of 20th century freedom movement of India, and the contemporary women's movement.

Dr. Trupti Shah has made a permanent place in the hearts and minds of thousands of men and women, boys and girls across class, caste, religious, ethnic lines, whose lives she touched. In an anthology profiling feminists from western India by Dr. Neera Desai (2006), she stated, "For me, the feminist perspective is not an ideology, but a way of life." Indeed Trupti, yours was truly a feminist way of life, both in the private and the public domains.

> Dr. Vibhuti Patel is Professor and Head, Department of Economics, SNDT Women's University, Mumbai.

> > (Sketches of Great Indians by C.D. Rane)

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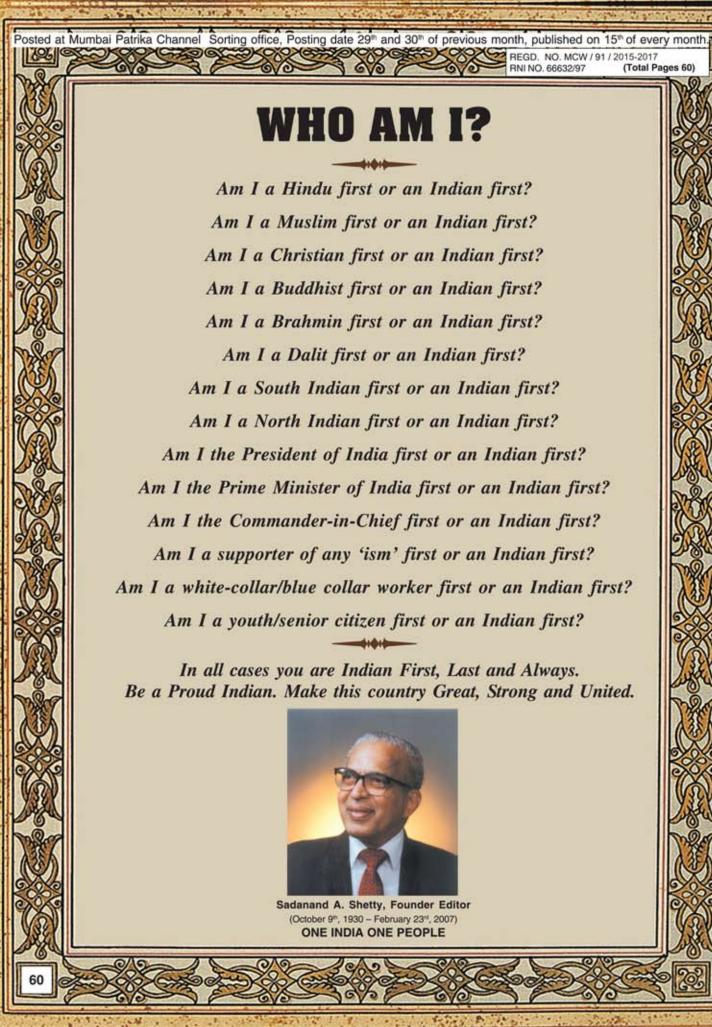
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WHO AM I?

REGD. NO. MCW / 91 / 2015-2017

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(Total Pages 60)



Am I a Hindu first or an Indian first? Am I a Muslim first or an Indian first? Am I a Christian first or an Indian first? Am I a Buddhist first or an Indian first? Am I a Brahmin first or an Indian first? Am I a Dalit first or an Indian first? Am I a South Indian first or an Indian first? Am I a North Indian first or an Indian first? Am I the President of India first or an Indian first? Am I the Prime Minister of India first or an Indian first? Am I the Commander-in-Chief first or an Indian first? Am I a supporter of any 'ism' first or an Indian first? Am I a white-collar/blue collar worker first or an Indian first? Am I a youth/senior citizen first or an Indian first?

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Sadanand A. Shetty, Founder Editor (October 9th, 1930 - February 23th, 2007) ONE INDIA ONE PEOPLE