



Technology, Education, Research and Rehabilitation for the Environment
Leading platform for development through Alternate Path

Community Interaction

KAAS Plateau - 2016 Report Card



***Conserving the Flowering Plateau
For
Ensuring Sustainability***

**Conservation through Participation
For
Sustainable Living
To
Build Future They Want**



Kaas plateau was recognized as one of the thirty-nine World Natural Heritage Sites in the Western Ghats when UNESCO's World Heritage Committee inscribed them in 2012. Since then, over last 4 years, hundreds and thousands of tourists, nature enthusiast, NGOs, ecologists, researchers, and wild flower lovers around the world have visited the Kaas plateau. The world heritage status ushered by UNESCO to this unique plateau of wild flowers has certainly driven the flow of tourists and seized the attention of many. Consequently, the responsibility to conserve it has heavily come down primarily on the shoulders of local communities surrounding the plateau and particularly on Joint Forest Management Committee (JFMC) which is formed with the collaboration between the Government of Maharashtra State Forest Department working closely with Indian Ministry of Environment and Forest and representatives of the local communities.

TERRE Policy Centre, not-for-profit organization, has been passionately working without any external financial support, with the local communities around Kaas and with local NGOs right from 2011. It had directly supported Government of India in getting the UNESCO's inscription of World Natural Heritage in 2012, particularly

through community dialogues held before inscription. It has, since then contributed through active engagement with the local habitants in surrounding villages and other stakeholders through capacity building efforts aimed at 'conservation and sustainable living'. It has also worked closely with JFMC since its inception. It has held annual events for community dialogues with villagers, JFMC and relevant stakeholders. The annual report cards were produced by TERRE Policy Centre with active but non-financial support from UNESCO-New Delhi office (Dr. Ram Boojh) to track the progress.

The Annual Report Cards that TERRE Policy Centre been publishing have proved to be one of the crucial documents to understand the status, progress and prospects at the Kaas plateau and to throw light on lessons learnt as well as the challenges that hindered the further planning and progress.

Present Report card for 2016 has listed the quantitative evolution, achievements and analyzes the various impacts through ecological, social and management lenses. It goes on to make the recommendations to JFMC and stakeholders for conservation and sustainable living.

TERRE Policy Centre has focused its work on awareness, local capacity building and acted as communication platforms. In 2016, community dialogue was through interaction with smaller groups and individual stakeholders including villagers, JFMC members, government officials, researchers, NGOs, tour operators, local family home stay operators, tourists, forest guards. The individual interaction, though is not replacement for the mass community dialogue, nevertheless was very useful in getting frank opinions and feedback, which many times are not forthcoming and do not surface in larger gatherings. The interactions with the individuals have resulted in assessing the progress towards conservation and sustainable living of the local community, the effectiveness of communication between the local community and the forest division to maintain the seamless interaction.

The interactions with smaller groups and individuals led to identifying the lessons learnt, achievements and communication gaps across relevant the stakeholders. The urgency to address the challenges and communication gaps was felt at once. The dynamics developed at Kaas plateau in 2016 has reiterated the fact that continuity in dialogues is a must to achieve progress smoothly. Thus, there's certainly a need to develop a mechanism that can ensure a seamless process of dialogues not only once a year but on regular basis between the stakeholders even outside JFMC. This will naturally translate into conservation and sustainable development of the plateau and the sustainable living for the local community.

Annual report cards are only means to an end. TERRE aims to build on the experience of Kaas to improve the Heritage site management and spread the lessons to other sites , starting with three other world Natural Heritage sites in state of Maharashtra-Chandoli, Radhanagari, Koyna- and promote sub regional networking of the local communities. It then aims to extend such networking to include other 35 sites in remaining states Karnataka, Goa, Kerala and Tamil Nadu.

Multilateral dialogue is the fundamental tool of the 'United Nations' to build consensus to address apparently insurmountable challenges. TERRE Policy Centre has dedicated itself to similar process by creating 'United Communities' and connecting them through modern communication technologies.

In brief, TERRE aims to build Smart Communities for Sustainable living at the UNECO's sites of World Natural Heritage.

Rajendra Shende

Chairman, TERRE Policy Centre.

1 July 2017

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Executive Summary

The Message

Joint Forest Management Committee (JFMC) ensures that conservation of Kaas plateau and the welfare of the local communities is achieved through the participative way and collective decision making. In 2016 the practice of holding the JFMC meetings continued for building consensus on important matters related to management of the site. The highest revenue was generated in 2016 since it was declared as the UNESCO World natural heritage site in July 2012.

Since 2012, the local community has worked tirelessly for conservation of Kaas Plateau and made all out efforts to attract the tourists.

However, 2016 was the most trying and challenging year in terms of the more than expected inflow of the tourists, lack of awareness among the tourists on responsible tourism, inadequate understanding about 'carrying capacity' of the plateau in number of tourists, particularly during the season, gaps in communications within and outside JFMC, differential understanding of the roles and responsibilities of the villagers, JFMCs and the Indian Forest Act and finally –lack of the relevant indices to measure the progress.

The inability to connect to other well-managed similar World Natural Heritage sites in India and outside for the purpose of networking, sharing the knowledge and learning by interaction has been the key inadequacy in the system. Numbers of exemplary initiatives were undertaken in 2016, which include, digitalizing the survey and accounting system, providing laptop to police station, installing LED lamps, donating for villages facing water shortages, expanded parking, increased employment and enhanced monitoring and vigilance.

As per feedback from local community, tourists in general seem happy; however 2016 exposed some of the formidable challenges for the management of Kaas.

Experience-based dialogue with the community

Range Forest Officer (RFO), chairman and member of JFMC shared their perspectives on the challenges faced by them while preserving plateau and benefiting the local community.

RFO shared the future plans which can be implemented to reduce the footfall. On the other hand the JFMC discussed about the challenges that they faced while taking the initiatives for sustainable development.

Evidence-based dialogue with the experts

Perspectives of researchers, ecotourism tour operators and an Environment NGOs who are actively involved in various activities at the plateau, analyzed the changes that they have been observing since the last four years. While appreciating the involvement of the local community they provided their feedback and suggestions extensively, particularly about adversities caused by excessive tourism.

Vehicles and Visitors data

In order to reduce the footfall, JFMC increased the rates for parking and entry. It helped to reduce the number of visitors significantly. For the 'carrying capacity' of the plateau the number should reduce even further. The need for fixing the number of carrying capacity in advance each year depending on infrastructure was felt as top priority. Apparently, the highest number of vehicles visited was recorded in 2016.

Revenue Report

Although the record sum of more than INR 10,000,000 was collected as revenue and INR 74,00,000 was saved for the welfare of the member villages, it is yet to be fully utilized.

Exemplary Initiatives

JFMC, led by Sarpanch (Chief) of KaasVillage took laudable initiatives to include two more villages i.e. 'Kusumbi Mura' and 'Pateghar'. So now JFMC includes 6 villages that have responsibility of conservation and would also receive resources for their conservation work along with original four villages i.e. Kaas, Ekiv, Kasani and Atali.

Introduction

Thirty-nine sites spread over the area of 7953.15 km² and four states in the region of Western Ghats, India were recognized as the Natural World Heritage sites by the UNESCO in July 2012. Out of these 39 sites, the state of Maharashtra inhabits Koyna Wildlife Sanctuary, Chandoli National Park, Radhanagari Wildlife Sanctuary and Kaas plateau as part of the Sahyadri Sub-cluster. Kaas plateau is home for around 350 flowering plants that include species listed as rare, endemic and threatened by Botanical Survey of India and International Union for Conservation of Nature (IUCN). Along with these flowering plants, some species new to science were recently found at the plateau. The area of 1142 hectares of the plateau is declared as the World Natural Heritage Site for its richness in biodiversity. The heritage site is approximately 25 km away from Satara, the nearest town place.

Kaas plateau has always been attracting researchers, ecologists and nature enthusiasts even before it was recognized as the heritage site. A Joint Forest Management Committee (JFMC), an eleven member committee formed as collaboration with the representatives from local communities and the Maharashtra Forest Department has been responsibly taking care of the conservation of the plateau since July 2012. The committee also ensures that local communities achieve a sustainable living out of the tourism activities carried out around the plateau.

The period of 4 years, from 2012 to 2016, has been exhausting and exciting for JFMC, mainly due to their enthusiasm and readiness to take benefit of inscription by UNESCO. The committee has successfully managed to increase the overall involvement of the local communities in the preservation activities for the plateau. Initiatives for capacity building like training of forest guides, home stay and solid waste management have definitely helped the local communities in the last 4 years. Also, the revenue generation has been on the rise throughout 4 years. In 2016, JFMC was strengthened by welcoming the addition of two new villages –‘Kusumbi Mura’ and ‘Pateghar’, which exemplifies the desire to extend the partnership. The issue of additional villages to be part of JFMC was discussed for last 2 years and was quite supported by TERRE Policy Centre. However, workload of the committee has increased significantly as the plateau is on the verge of turning into a fun-loving tourist place than a nature heritage site.

Tourists have been flocking the plateau every blooming season lasting for couple of months. Due to the lack of awareness about the significance of the place, grave concerns over trampling down the flowering plants and threats of increasing constructions near the plateau have been expressed by many researchers. Though the number of visitors has gone down in 2016, the numbers are still significantly high as compared to the carrying capacity of the plateau. The scenario of overcrowding has also increased the monetary and infrastructural requirements of JFMC for effective and better management.

2016 was the year when JFMC with the help of the Maharashtra Forest Department functioned independently per se. There was minimal intervention in working of JFMC. The guidance provided by the TERRE Policy Centre, other NGOs and researchers who were actively involved in tracking the work by JFMC since last 4 years was scanty. It was a litmus test for the committee to check whether it can maintain seamless communication and smooth dialogue with other organizations involved in various activities at Kaas plateau.

This annual report card for 2016-17 is an overview of the achievements and challenges that JFMC and management of Kaas witnessed during 2016. It is hoped that the report card would help in learning lessons from activities of various entities like JFMC, the Maharashtra Forest Department, NGOs, policy makers, researchers, ecologists and tourists to address the challenges, assess the direction in which the conservation is proceeding, to comprehend the intended and unintended impacts of the progress and to understand the underlying drivers of the impacts.

Experience-based dialogue with JFMC

Joint Forest Management Committee is an eleven member committee that includes representatives from the nearby communities and an office bearer from the Government of Maharashtra (Satara) Forest Department. The responsibility of preserving the biodiversity of Kaas plateau and ensuring the sustainable development of the member villages rests with JFMC.

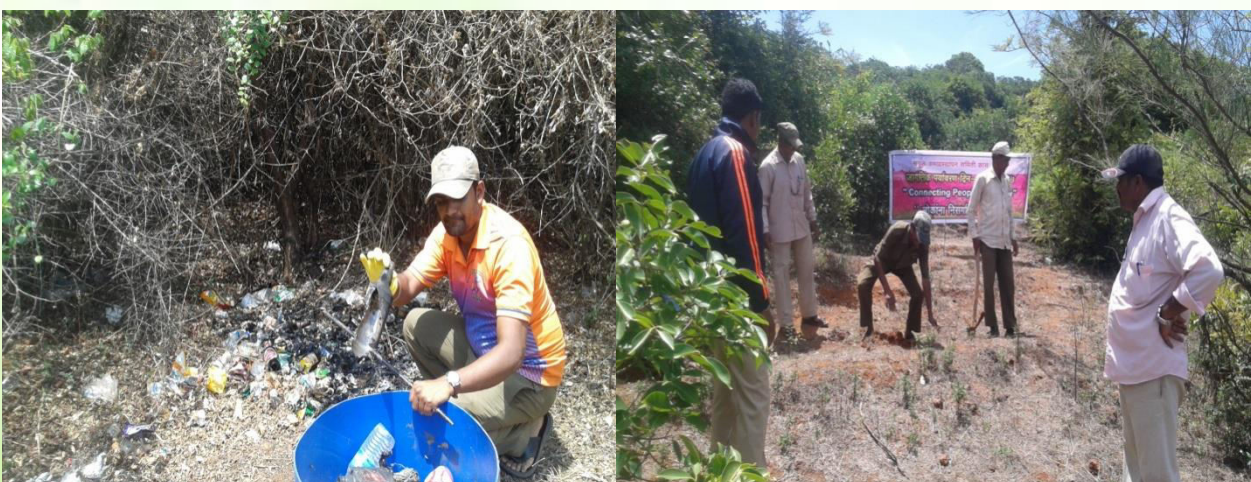
Sachin Dombale, Range Forest Officer, Medha, worked closely with JFMC for the conservation of Kaas plateau in 2016. His prime focus was on conserving the plateau by reducing the footfall. He said, “According to research carried out by Prerna Agarwal (researcher and expert on natural protected sites), the risk of impact of trampling by tourists on fragile and small wild flowers and other plants of Kaas is a very serious issue. That risk dictates that the carrying capacity has to be very low for Kaas plateau, till trampling is avoided. Thus, by increasing the entry fees and parking fees by 5 times, JFMC aimed to reduce the flow of tourists and risk of trampling at the plateau. Despite the increase in fees, the plateau hosted almost 9 to 12,000 visitors on weekends. The revised entry and parking rates certainly helped to reduce the number of visitors. However, that did not help in reducing the number of tourists to the expected extent”. Forest Department primarily focused on the ways to reduce the risks to conserve the biodiversity of the plateau. With the help of new technology, the forest department is planning to address the issue of adverse impacts on the wild flowers by equal distribution of the visitors on weekdays and weekends. “In the next few years, we might shut down the gate booking facility and instead run entire booking facilities online for every visitor. We can manage the crowd and hope to achieve equal distribution of visitors throughout the week through a dedicated online platform for booking. Once tourists arrive at the plateau, we will regulate their movement only on designated paths to reduce impact of trampling”, Dombale further added.

The revised entry rates have played a key role in assessing the crucial events of 2016-17. Although, it resulted in reducing the number of visitors this year, JFMC witnessed the highest revenue generated in the last 4 years.

Vishnu Kirdat, Chairman of JFMC, while sharing his experience of 2016-17 said, “We collected the total amount of INR 11,781,130 (USD 182,842) in 2016. After the total expenditure, JFMC has INR 74,00,000 to distribute among its member villages for the conservation efforts.”

The amount which is dedicated to the development and welfare of the communities is yet unused as the committee needs to arrange for the meetings for further decisions and their approvals. “The four-month duration of the blooming season is the only opportunity for the local communities to earn through small businesses that to cater to the tourists. However, the rest of the year people keep looking for work and face hard times due to the lack of steady income”, Kirdat said while expressing his concern. He also feels that with the increase in entry fees, the JFMC should be able to provide basic facilities like toilets, decent road and easy transport service for senior and handicapped citizens.

Guide-training is one of the important activities that have encouraged local community to feel involved in the conservation of Kaas plateau. Though the guide-training couldn't be conducted by the experts in 2016, many nature enthusiasts from the local communities collaborated with the Department of Forest for the overall management and guidance throughout the season. **Ashok Kurale, member of JFMC**, spent most of his time at the plateau especially during the blooming season. He said, “The number of visitors flocking the plateau has consistently been on the rise since it was recognized as the World Natural Heritage Site in 2012. Though the number of visitors in 2016 (73,523) is much lesser than 2015 (125,923)”. He also informed that additional activities were initiated and conducted by the communities after the season to preserve the natural heritage of the plateau. “We collected solid waste, especially plastic, glass bottles and chips wrappers in tremendous amount. We also organized a tree plantation program in the forest patches which received good response from all 6 villages.”



Solid waste collection and tree plantation initiatives by the villagers on ‘Environment day’

The year of 2016 also saw an incredible rise in the construction of hotels and resorts on the way to Kaas plateau. Local communities have shown their grave concern about this rising pattern of construction, wondering if they are really legal constructions, as they fear that Kaas plateau will turn into a place full of tourist crowd and illegal constructions the way it happened for in Mahableshwar and Panchgani.

Positive steps reported

- Improvement in Revenue Generation
- New and bigger parking space-designed for 1000 vehicles
- Preventive measures to reduce trampling like marking the paths
- Significant involvement of the locals as guides at the plateau by temporary employment.
- Special transport for senior citizens and differently abled tourists
- Support for digital accounting and monitoring by providing the laptop to Police Station in Medha
- Additional inclusion of two villages near Kaas i.e. Kusumbi Mura and Pateghar in JFMC
- Increased employment (direct and indirect) of nearly 200 people
- Provision of LED lights, gas connections for cooking, Bio-water heaters for improved energy efficiency and human health.
- Enhanced commitment of the locals, knowing most of the tourists appreciated efforts of the villagers to improve the site.
- Development of 'Home-stay' lodging and boarding. One of the home-stay got license from Government of Maharashtra Tourism Development Corporation (MTDC). Other 3 home-stay hotels are operating.
- Licensed home stay reported that about 30 tourist families took advantage of home-stay. Another 3-4 home-stay families are getting ready for coming season.
- Bank of Maharashtra announced assistance to the children for school uniforms and TERRE Policy Centre offered scholarships for deserving primary school students.
- There are new hopes among local youths for new life with sustainable leaving. Many of them leave for small jobs in city for about INR 10,000 (USD about 150) PM. These youngsters are now ready to start business related to services to tourists, researchers, nature lovers and officials.

Challenges and Possible solutions

Short Term Challenges

- **Surge of Tourists for short duration:**

Kaas plateau is visited by most of the tourists only for a couple of months, that too mostly on weekends, in rainy season. The main attraction is the carpets of varieties of wild flowers. Hence the density of the tourists during these months and the weekends are dangerously high. The key challenge is how to reduce the risks to the ecosystems arising out of such sudden surge. The fragile flowers and small area of plateau is really the victim of such onslaughts of tourists, many of whom are not aware of the damage they are doing to the plateau and the forest.

Possible options:

- ✓ There is need to find the carrying capacity of the plateau, which may keep changing depending on the availability of infrastructure and level of awareness of the tourists. There is a strong case to limit the number of tourists per season. On-line reservations need to be started.
- ✓ The adequate basic amenities near the plateau (Permanent Toilets, temporary toilets, Medical Aids, picnic spots, relaxing places) need to be further developed to bring it to higher standard
- ✓ The necessity of setting up state-of-art **interpretation centre** for the visiting tourists to provide guidelines for providing the information on outstanding universal value, uniqueness and importance of the Kaas plateau. Responsible behavior towards fragile nature. It is understood that funds (Around Rs 20 millions –USD 300,000) are required for the setting up the interpretation centre. JFMC need to follow up on urgent basis to check and act.
- ✓ The same centre can be equipped for JFMC meetings /as training centre for Guides and Forest Guards.
- ✓ The packaged time-bound tours on the plateau from arrival to departure that includes visit to plateau of flowers, village life, tour of herbal plants , boating, lectures and demonstrations would help in making tourists move in organized manner. Such packaged tours could be charged.

Long Term challenges

- Increasing and threatening constructions of hotels, restaurants, resorts-mostly Illegal in protected area- would cause obvious irreparable degradation of the uniqueness, biodiversity and endemic species.
- Sustainable living of the locals would be greatly affected due to influx of permanent residents due to employment and income opportunities arising out of construction, hotels and resorts. Goal of supporting locals for their own sustainable living would be defeated.
- There is risk of not achieving goal of sustainable income through year-round employment and activities.
- Due to trampling of flowers by over enthusiastic tourists, photographers and researchers the survival of World Natural Heritage is at fatal risk. If the research results of permanent damage to fragile flowers are true the very reason for the tourists flocking in plateau would be destroyed.
- The local colleges in nearby city of Satara should initiate courses like eco-tourism, sustainable tourism
- There are number of other tourists attractions on plateau unrelated to world heritage characters. Those need to be promoted by the tour operators and the government. The places that are for adventure-trekking as well as for average tourists are: Vajari 850 ft waterfall, Bamnoli boat club, Koyana sanctuary, Vasota fort.

Evidence-based guidance from experts

Feedback and expert opinions:

Prerna Agarwal

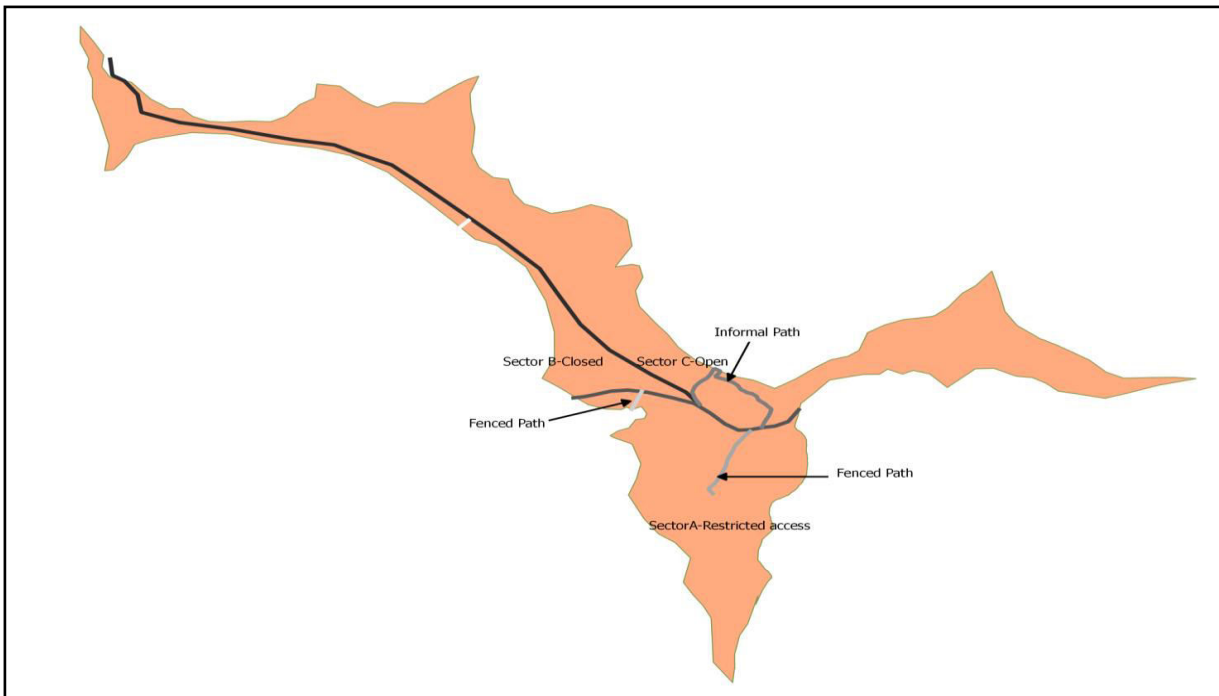
(Independent Researcher in the field of Recreation Ecology who has been studying the ecological impacts of tourism on Kaas plateau since its inception as a UNESCO WHS. Her project was funded by the Rufford Foundation, Inlaks Ravi Sankaran Small grant program and the Satara Forest department).

She reported on critical and threatening impacts on the site as a result of tourist activities.

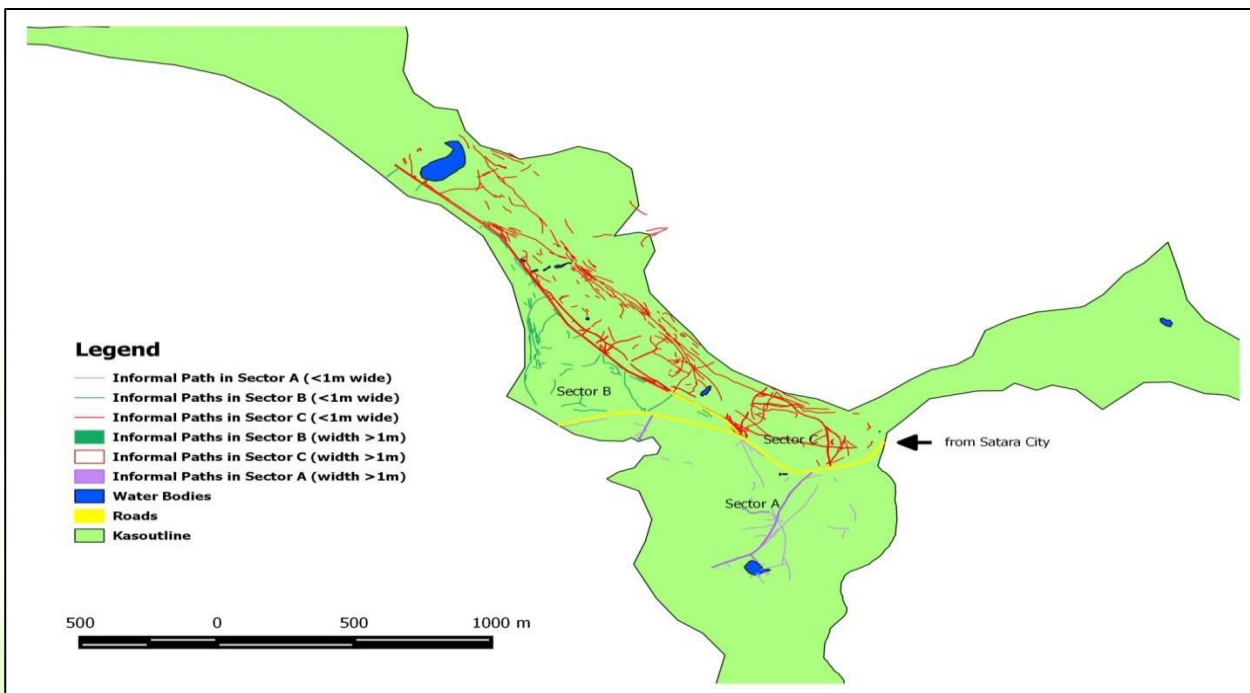
Her feedback:

“The outstanding universal value of Kaas is its rich natural heritage of highly specialized edaphic plant communities with about 350 flowering plant species and exceptional aesthetic beauty. These ephemeral communities of rock outcrops have a very short growing season, most are insect pollinated and they mass bloom to attract pollinators. For endemic species such as *Aponogeton satarensis* and *Rotalaritchiei*, Kaas is one of the last remaining hopes. Unfortunately the carpet of flowers, meant to attract insects, also draws thousands of tourists every year. Unregulated mass tourism poses a severe threat to these ecologically fragile communities, which hold several critically endangered and endemic species. Managing of such high levels of tourism is currently a major challenge at hand.

I had first seen Kaas in 2005 when tourism was negligible and it looked pristine. During my visits in 2011 to Kaas, when tourism was already at its peak, I could not help notice the visible marks of vegetation trampling and the compacted soil in highly frequented areas of the plateau. For instance, it was shocking to see car tyre marks on the flower beds, and flowers being plucked and damaged by visitors. Fencing done by the forest department in 2012 helped checked vehicular trampling, however, recreational trampling still poses a major threat since the fence is not complete in many places, which provides access points to visitors. I realized there was a dire need to understand the impact of trampling on these plant communities, hoping this scientific knowledge would feed in tourism management strategies designed by the forest department and the JFMC.



Map of Kaas plateau showing various sectors on Kaas plateau created by the Satara Forest Department. Sector A- has restricted access. Sector B is conservation zone. Sector C is currently the open sector facing maximum damage.



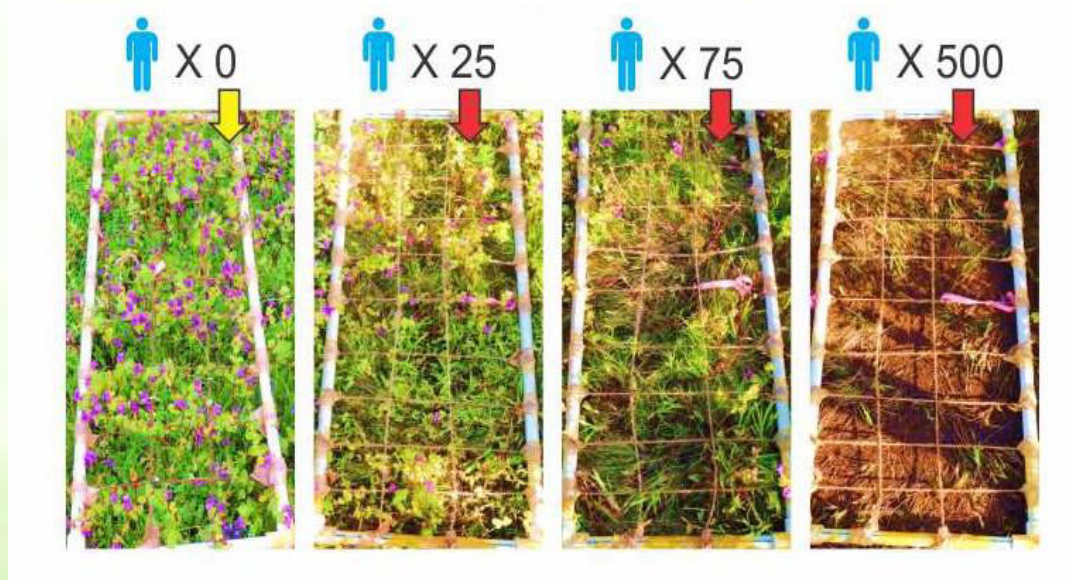
Purple lines - informal paths in Sector A, green lines - informal paths in Sector B, and Red line - informal paths in Sector C. The open sector has the maximum number of informal paths, where tourism is largely unregulated.

I have been studying the impacts of visitor trampling since 2012 using both observational and experimental methods. Through my research I observed that these plant communities are extremely sensitive to trampling pressure, and a network of informal paths has been created in the sector open from visitors, and in areas where the fence is incomplete in the closed sectors. I have also seen invasive species on the rise in the tourist zone.



Sites of trampling at Kaas

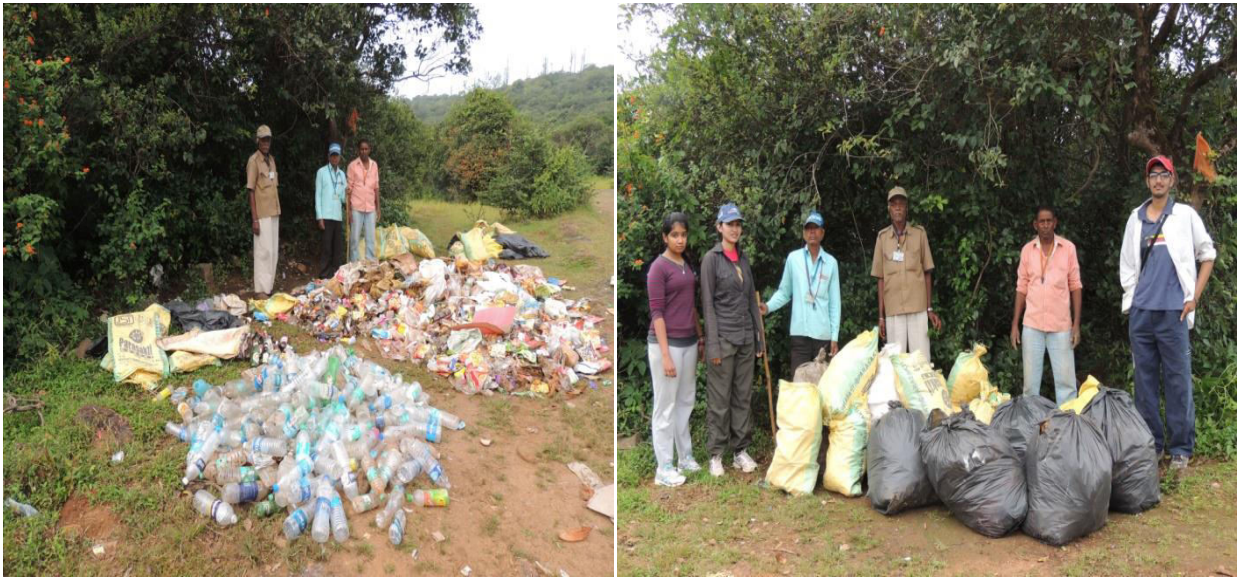
I fear if similar kind of tourism continuous to exist at Kaas, the composition of these extremely fragile plant communities might get altered dramatically. It is difficult to believe that the nearby popular tourist destination -'Panchgani' table land, which is geologically similar to Kaas, once had similar carpet of flowers.



Effect of trampling on *Herbaceous* plant communities

Source: Article published in SahyadriVarta (January 2017 issue)

Excessive tourism has also resulted into massive amount of solid waste. The JFMC members have been regularly collecting waste from the plateau. A few tourist organizations, NGOs from Pune, Mumbai and Satara engage in managing solid waste with the JFMC. However, that's not the ultimate solution. Reduction in solid waste generation cannot be escaped. To manage any kind of problem occurring due to excessive tourism, scientific research needs to be taken into consideration.



Collection of solid waste by JFMC members and volunteers

I have been working closely with the Forest Department and the JFMC to combat the impacts of recreational trampling by creation of designated paths, training of local people as guides and helping set up an open interpretation centre. However, our efforts seem to fall short and the situation is grim. The sheer number of tourists is the biggest problem. If managed properly, Kaas can be one of a kind ecotourism model of India. The silver lining lies with the Forest department and JFMC both keen towards protecting their very own natural heritage.

JayeshParanjape

(Recreational Tour Operator who runs an ecotourism travel company and has been regularly bringing tours to Kaas).

His feedback:

“I have been visiting and organizing tours to Kaas plateau since 2012. As I have a background of ecological sciences and botany, my tours usually indulge into knowledge sharing about the plateau and its biodiversity. However, that’s not the case with every tourist coming to the plateau. In fact, people visiting with a perspective to understand the ecological and natural importance of Kaas are rare as compared to the people flocking the plateau as a weekend destination. My experience at the plateau was not at all pleasing since the last couple of years. Primarily, because of the tremendous amount of crowd that is attracted to this so called ‘Maharashtra’s Valley of Flowers’. Most people are unaware of the space they are entering into. Overcrowding, heavily pouring rains and muddy roads literally crumble down the traffic control measures and the trip to plateau turns into a dangerous experience. Frequent traffic congestions make people walk for almost 2-3 Km especially on weekends during September. I have seen a lot of road mishaps. This inconvenience forced me to wrap my tour well before schedule. These frequent traffic congestions might be resolved if access to the plateau is made available only through a shuttle service.

On a brighter side, the option of ‘home-stay’ is simply amazing. The urban population can experience the rural lifestyle with authentic local food while staying at a place of someone from the community. However, the current numbers of home stay are not adequate for the amount of crowd. This issue could be resolved if a community based home stay is developed in nearby villages.

For this season I have decided to cut down on a couple of tours in order reduce the risk of adverse impacts at Kaas. Hopefully people will soon understand that Kaas is not just weekend destination that they are looking for but goes much beyond that. It should be educational and nature observation destination that creates awareness on conservation.”

Dr. Sandeep Shrotri

(Author of the book 'Flowers of Kaas' and chairman of a Satara based environment NGO, that has worked closely with TERRE Policy Centre.)

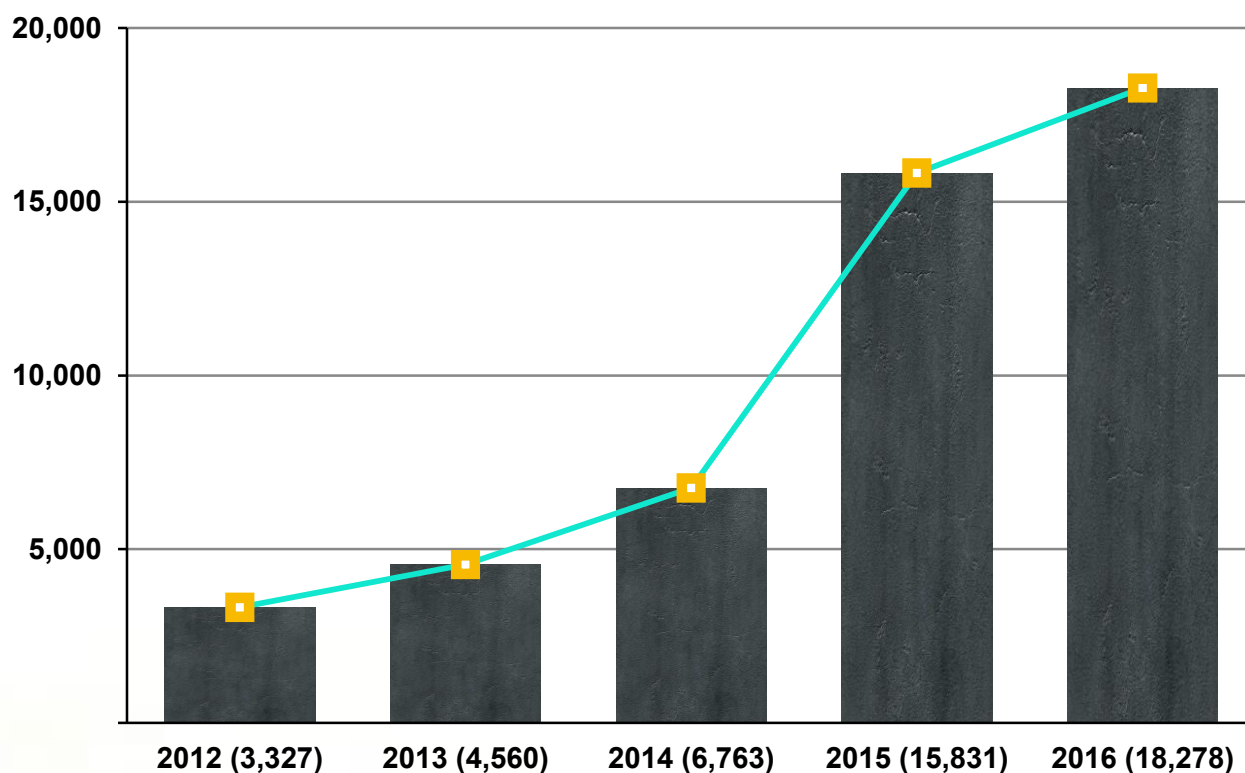
At *Raanvata*, we have been observing the ecological changes occurring at Kaas plateau since it was declared as the heritage site. After gaining a crowd pulling publicity in 2012, the risk of harming the biodiversity of the plateau had risen.

However, in the last couple of years, government authorities have been successfully managing the crowd to preserve the various endemic species at Kaas. Importantly, people from the local communities have realized the significance of the plateau and its importance to the world. They have certainly developed a consciousness about preserving various rare species of plants and flowers. Efforts for capacity building have also been put in the right direction since a couple of years.

However, I think there's a need to think more about long term goals.

Vehicles and Visitors Data

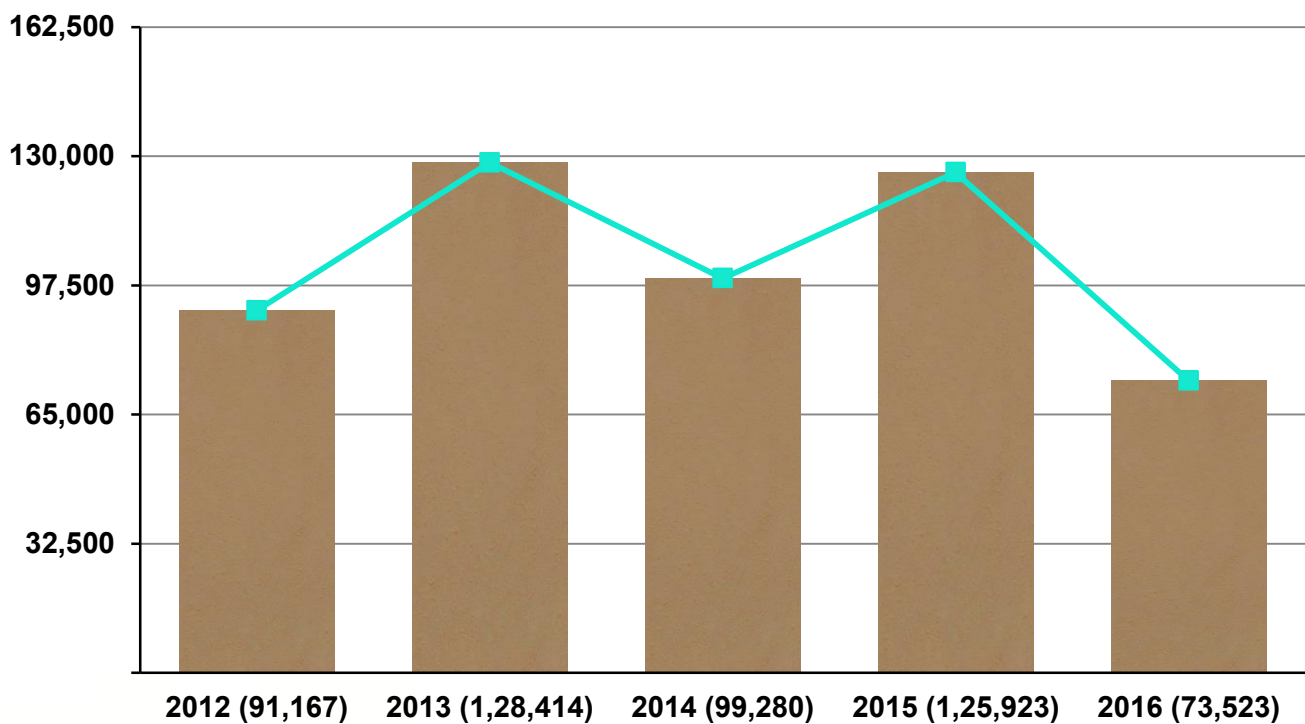
Number of vehicles visited to Kaas plateau during 2012 – 2016 (Appendix II)



Number of vehicles visited in 2016:

- In the year of 2016, Kaas recorded highest number of vehicles.
- 18,278 vehicles had 575 Two wheelers, 16,939 Four wheelers and 764 mini buses
- Parking charges for two wheelers were INR 10, for four wheelers INR 50 on week-days and INR 100 on weekends, for mini buses it was INR 100.
- Parking fee collection for 2016 was INR 9,29,090.
- Despite the promising amount of revenue has been generated through parking fees the amount of vehicles visiting the plateau is surely a reason to worry.

Number of people visited to Kaas plateau during year 2012 - 2016 (Appendix II)

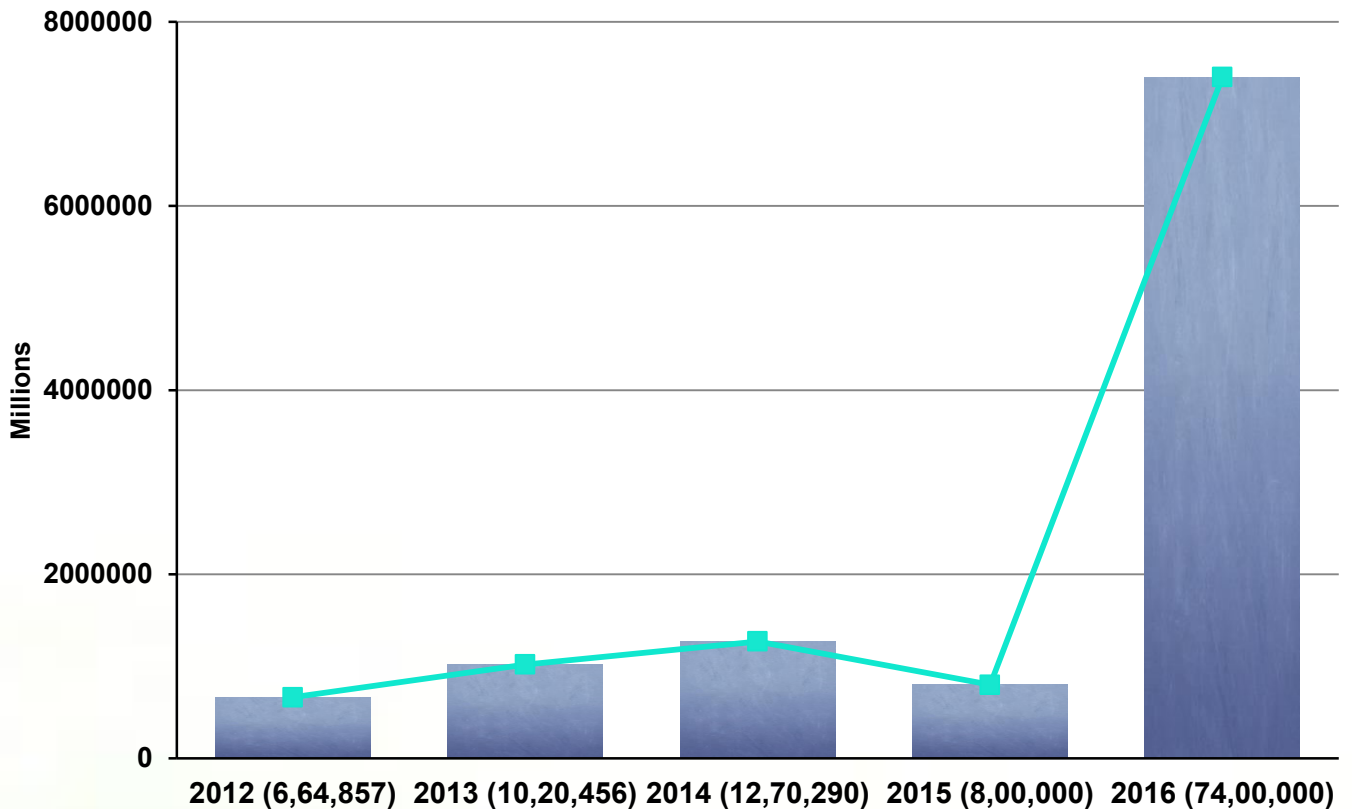


Number of Visitors in 2016:

- Kaas was visited by 73,523 people in 2016, especially during the blooming season.
- The number has come down significantly as compare to the year 2015 (1,25,923)
- However there is still a need to reduce the footfall even further. On the most crowded weekends in 2016, 9000 to 12,000 people were present at the plateau at once.
- Research suggests some plants are sensitive to even 25 times trampling, and die completely for that growing season (Agarwal *pers. comm.*)

Revenue Reports

Funds (INR) allocated for Welfare and Development of Local Community During 2012 – 2016 (Appendix II)



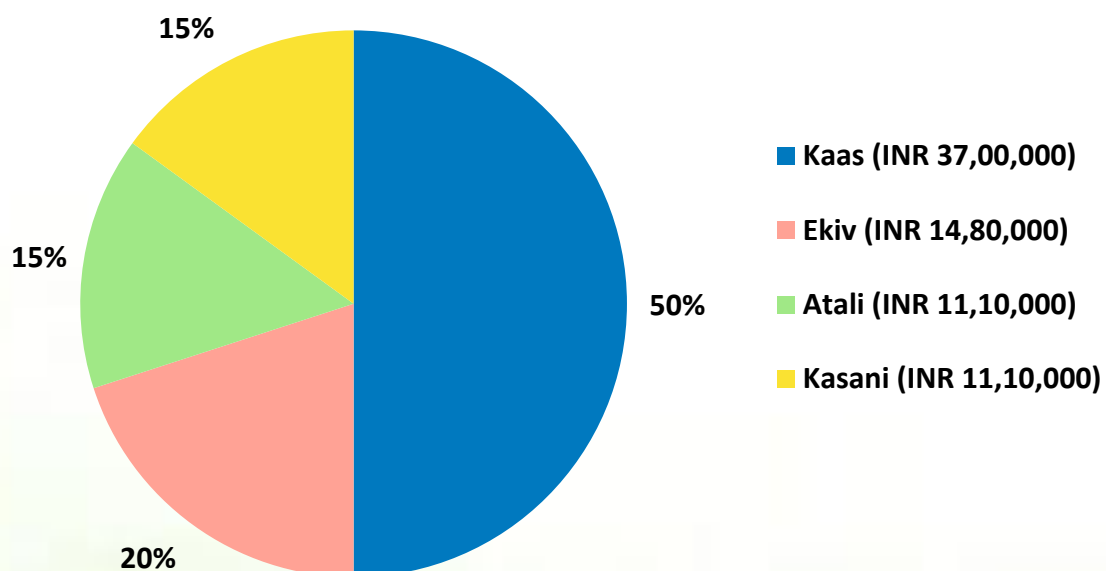
Revenue generation:

- The highest amount of revenue was generated in 2016. Total amount of INR 1,17,81,130 was generated as a result of 5 to 10 % increase in the parking and entry fees.
- After the expenses, INR 74,00,000 were saved for welfare and development of nearby communities and conservation of the plateau.
- This amount is almost double than the collective amount saved in the previous years.

Distribution of revenue:

- The amount to be spent on the welfare and development is distributed among the member villages as shown below.
- Though JFMC managed to generate highest amount of revenue in 2016, the amount is yet to be used properly for the development purposes.

Distribution of revenue in the year 2016 (Appendix II)



Note: The distribution to additional two villages that are now part of JFMC is being decided.

Recommendations

- **Regular dialogue** between local community and the forest department to manage Kaas Plateau and surroundings, including improvements in services to tourists, collection of revenue and expenditure would be essential. JFMC meetings should be part of such dialogues. The report of the meetings should be made public in transparent ways. Transparency would develop trust, commitment would result into cooperation and creativity would lead to conservation.
- **JFMC has to be decisive**, now that they have regular and adequate revenue. Reaching at a consensus to decide deadlines for administrative and clerical work, leadership by local head and focal point of Forest department would be needed.
- Throughout the year, workshops and well-designed trainings related to ecotourism and preservation from the experts would be very helpful for the community and forest guards.
- **A proposal should be made** which can be used as a directive to distribute revenue for conservation purposes and sustainable development of the community.
- **The local community should be made more aware** about the linkages between conservation activities , their sustainable living and the need for prudent financial management.
- **Communication gap** between the Forest division and the local community can be easily avoided if addressed at the right time with regular interactions and knowledge sharing. The stewardship of the Forest department is needed along with leadership of local government.
- **Solid waste generated at Kaas plateau** should be reduced drastically which can be achieved through 'No plastic zones' near the plateau and engaging private sector and volunteers
- **Emergency medical aid**, plastic free drinking water arrangement, transportation assistance for senior and handicapped citizens should be arranged.

- **The need of the hour** is to make sure that sufficient supervisory and monitoring efforts and mechanism is in place for the 'crowd' and 'tourist surge' management especially during the season and weekends, to reduce adverse impacts and help conservation Kaas' natural heritage.
- **A urgent study** on on-going activities on eco-tourism should be carried out to understand various successfully ecotourism models in operation in India and abroad to understand carrying capacity, short and long term plans for knowledge-enhancing, responsible tourism, creative activities that would lead to conservation and sustainable living of the communities.

Conclusion

2016 was a year of trials and tribulations for local communities and JFMC. There were certainly some initiatives taken up by JFMC to enhance the efforts for conservation of the natural heritage of Kaas. However, the year of 2016 highlighted short term and long term risks to the Kaas plateau and triggered debates in media, research among experts and discussions among the stakeholders. JFMC worked almost independently, but needed much more cohesive decision making, sense of urgency and rigorous follow up.

Research has shown that trampling is taking a huge toll on the plateau, and effective management strategies to protect the natural heritage sites should be designed and implemented to avoid 'terrible tourism'.

Lack of regular and effective communication mechanisms, void in awareness about importance of Kaas plateau and excessively 'trampling' enthusiasm of the tourists are 'hampering' the natural heritage character of Kaas plateau. In coming years, JFMC, researchers, NGOs and tourists should co-operate with each other to make Kaas a model of successful eco-tourism and sustainable living.

To conserve the colors of Kaas, firstly, it's very important to wash out the 'urban-colours' of the over-enthusiastic tourists. To manage the world natural heritage like Kaas, it is important first to manage the minds of the visitors that can understand and analyze the ecological, social and management aspect of the plateau.

It's more effective to take precautions and prevent the degradation of the Kaas's eco-systems of blooming flowers than looking for cure to revive fading and vanishing colors.

END

Appendix I

Inputs from Interaction with:

- | | |
|-----------------------|--|
| • Vishnu Kirdat | <i>Chairman, Joint Forest Management Committee</i> |
| • Sachin Dombale | <i>Range Forest Officer, Forest Department, Medha</i> |
| • Ashok Kurale | <i>Member, Joint Forest Management Committee</i> |
| • Vitthal Kirdat | <i>Home-stay Operator and Local expert resident</i> |
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| • Dr. Sandeep Shrotri | <i>Chairman, Raanwata (Satara)</i> |
| • Prerana Agarwal | <i>Nature Researcher (Recreation Ecology)</i> |
| • Jayesh Paranjape | <i>Founder, Western Routes, Tour Operator</i> |
| • Akhilesh Patil | <i>Media-Communication Studies, S.P.Pune University</i> |
| • Amogh Bhongale | <i>Community-Media, Tata Institute of Social Science</i> |

Note:

Feedback was also received from numerous other stakeholders and media reports .

Appendix II

Graphs

- Number of vehicles visited to Kaas plateau during 2012 – 2016
- Number of people visited to Kaas plateau during year 2012 - 2016
- Funds (INR) allocated for Welfare and Development of Local Community during 2012 – 2016
- Distribution of revenue in the year 2016