



Abhishree

Title- Costs of Biodiversity Restoration: A Case Study of Okhla Bird Sanctuary

ABSTRACT:

The continued expansion of the human population and the growth of their per capita consumption have resulted in an unsustainable exploitation of the biological diversity present on the planet Earth. Effective strategies of conservation are vital to the survival of the human species. Safeguarding the biodiversity habitats including wildlife sanctuaries, national parks and biosphere reserves plays a crucial role here. Successful approaches of conservation require adequate investment directed towards restoring these areas. On the contrary, these protected areas are at various stages of degradation due to development and anthropogenic pressures. The Okhla Bird Sanctuary is one such example of a protected area. Tremendous anthropogenic pressure over the years in the form of increasing development activities and pollution discharge in the wetland has led to higher level of pollutants in the water-body and a decline in the number of the bird species. In this study, we conduct an opportunity cost analysis of restricting the activities that are posing threat to the wetland and the sanctuary. The opportunity cost is combined with the infrastructural costs of restoring the water quality of the wetland. The study found out an opportunity cost of INR 5,192 crores at 2020 prices along with the technical costs of curbing the pollution in the wetland. The unauthorized colonies and the industries are responsible for the discharge of the untreated wastewater into the wetland. Thus, the solution is to regulate the effluent released by these units along with preventing any future construction in the vicinity of the sanctuary.

Key words: Biodiversity restoration, ecological sensitivity, opportunity costs, water pollution.



Abijeet Singh

Title- Timber Harvest in Agroforestry Supply Chain: A Market Efficiency Analysis

ABSTRACT:

Since the 1980s, timber agroforestry in India has gradually engendered ardent patronage, both in the economic and political sphere. This support has elicited several initiatives to incentivise farmers to adopt agroforestry, not only as a way to increase their incomes, but also to ease the pressure on forest timber resources. Little consideration, however, has been afforded to the development of wood-based markets, where conflicting government policies, the influence of traders and intermediaries, and oligopolistic behaviour of the end-users have precipitated decreased returns to producers to ensure increased returns to producers, a cost-effective agroforestry market chain is essential. The objective of this study is to identify the timber agroforestry value chains, assess the institutional and economic efficiency of the chains, and identify policy changes to improve the functioning of value chains and enable farmers to enhance their income. Market Efficiency Analysis using the Value Chain Framework was adopted to assess the market chains. Three main chains were identified: one involving timber merchants and commission agents; second involving just the commission agents; and the third involving a government intermediary. The first chain was the most dominant over the others, with more than 77% of the producers using the chain to sell the produce. Price uncertainty, low level of communication, negotiation of prices, and no technical assistance provisions precipitated a low level of trust in the predominant market chain. Chain II is also unfavourable in respect of trust between actors. The market efficiency analysis shows that in all chains, market transformation of the product is needed to market the product, with marketing intermediaries incurring high costs and earning exorbitant margins. It is observed that marketing margins play a significant role in ascertaining the efficiency of a market system. Thus, fewer the intermediaries, lesser the margins, higher the efficiency. Potential policy implications were also suggested to improve the chains.



Ankita Madan

Title- The Impact of Using Mobile Applications based Information on Agricultural Yield

ABSTRACT:

The deteriorating condition of Indian agriculture, a major sector of our economy is a matter of grave concern. Low agricultural yields in our country have been attributed to various factors. Some of these contributors of low yield point out to the lack of information among the farmers (regarding soil health, crop diseases and weather) along with the other macro factors. This is the case in spite of several informative tools already made available to the farmers but not performing to the desired level of satisfaction mainly because of their huge dependence on manpower and supply driven nature. Thus, recently a thrust is being given on the role of mobile applications as they provide demand driven and very easily accessible information on fingertips, involving minimum manpower. Ministry of Agriculture has put an emphasis on providing accurate and timely information regarding crops health, soil health, weather, plant disease, etc., via mobile applications to farmers, thereby, reducing their risk and improving crop productivity. Therefore, it is a matter of curiosity to find the impact of use of mobile applications based information on yield. The study has been conducted by carrying out household level data collection through purposive sampling of farmers of Kachhwa village in Karnal district of Haryana. Propensity Score Matching is used in order to draw comparison in yield between the groups of farmers using mobile application based information (treatment group) and those not (control group). The analysis has revealed a positive and significant impact of using mobile application based information on the agricultural yields. However, this needs to be accompanied with macro factors i.e. public investment, credit, subsidies etc. for maximizing the yields. The sub findings reveal that the farmers using apps as informative tools are more educated, operate on larger lands and rely less on other sources of information as compared to the farmers not using this informative tool.

Key Words

Mobile Applications based Information, Informative Tools in Agriculture, Propensity Score Matching



Arijeet Krishna Srivastava

Title- Analyzing various monetary incentives to shift farmers' preference away from paddy straw burning in Punjab

ABSTRACT:

The progressive deterioration of air quality during winters due to smog in Delhi and other parts of the northern belt has become extremely common. According to official statements and literature, one of the major culprits is 'crop residue burning' in the states of Punjab, Haryana, and parts of Western Uttar Pradesh (Pillai & Rambani, 2016). Crop Residue Burning (especially paddy straw burning) is an old age practice of burning the leftover straw of the harvested crop lying on the surface of the soil. Several bans and numerous alternatives have been provided by the State and the Central governments to tackle this problem, but the problem is still prevalent. Although there are a variety of alternatives to paddy straw burning, these are not economically feasible to farmers. There are numerous costs associated with each option that abstain farmers from using them despite environmental and health benefits. Hence, this research argues that an effective way to incentivize the farmers in changing their preference against burning the crop residue is through payment mechanisms by the government. The objective of the study is to suggest different options of paddy straw management to the government incorporating farmers' opinions from the state of Punjab. It also aims to calculate the monetary incentives in these options of government intervention. The study argues that suggested monetary incentives can curb the problem and alleviate the environmental and health concerns associated with paddy straw burning. The study also recommends that the government and farmers need to understand the environmental concerns associated with economically profitable crops like paddy and wheat, and farmers should gradually shift from the present cropping pattern towards diversification with support from government intervention.



Ayushi Khurana

Title- Factors Affecting Consumer's Intention to Purchase Fairtrade Clothing

ABSTRACT:

Consumer's intention to purchase is determined by a number of factors. These factors range from the complex elements of consumer behaviour to traditional aspects of price, quality and durability. This study uses "Theory of Planned Behaviour" along with premium price and functional attributes of Fairtrade clothing to determine the factors which affect consumers intention to purchase Fairtrade clothing. It also captures how these factors influence the intention to purchase. The study uses primary qualitative data and a synthesis of secondary literature to derive the results using the method of factor analysis. Final results suggest that all constructs derived from the "Theory of Planned Behaviour" (Attitude towards the Purchase of Fairtrade clothing , Social Norms Guiding the Purchase Intention and Perceived Behavioural Control) have a positive impact on the intention to purchase. Functional Attributes also has a positive impact on the intention to purchase. Premium Price of Fairtrade clothing is the only factor which has a negative impact on the intention to purchase. The findings of this study are useful for marketers, public policymakers or the producers who wish to promote wider use of Fairtrade clothing and foster the expansion of markets for more products like Fairtrade.

Key Words: Fairtrade Clothing, Intention to Purchase, Theory of Planned Behaviour, Premium Price



Debanjali Dasgupta

Title- Drivers of Adoption of Environment Management Practices in Indian Cement Industry

ABSTRACT:

The aim of this study is to determine the drivers of adoption of environmental management practices in the Cement Industry in India. It also attempts to establish a link between financial performance of the cement firms and the adoption of Environment Management Practices by them. For determining the relationship between financial accomplishments of the firm and the adoption of Environment Management Practices, Data Envelopment Approach has been applied where the financial performance indicators of the firms have been used as inputs and the sustainability scores based on the Environment Management Practices adopted by the firms have been used as outputs. The DEA scores reflect the commitment of the firms in adoption of Environment Management Practices. For determining the Environment Management Practices followed by the firms, content analysis of the annual reports/sustainability scores of the firms has been done. For determining the factors influencing adoption of Environment Management Practices, content analysis of the annual reports/sustainability reports of the firms have been done followed by Principal component Analysis. A higher DEA score of the firms is interpreted as a greater commitment towards the incorporation of Environment Management Practices of the firms given their financial condition. The results show that most of the cement firms have a high DEA score indicative of the firms following best practices given their financial status. The main factors influencing the adoption of Environment Management Practices are technology innovation, adherence to environmental regulations, operation management and stakeholder perceptions.

Keywords: Environment Management Practices, Sustainability scores, Data Envelopment Approach, Principal Component Analysis.



Deeksha Agnihotri

Title- Analysing Stakeholders and their Perceptions for Springshed Conservation through PES

ABSTRACT:

In this study, a local-level water governance initiative in Palampur, Himachal Pradesh is observed to make inferences about the implementation of Payments for Ecosystem Services (PES). The Palampur town receives a part of its water supply from the Bohal Spring which originates in the Bohal Spring shed, 15 km upstream from Palampur. As a result, a contract between the Palampur Municipal Council (PMC) and the Village Forest Development Society (VFDS) of the upstream villages was signed to conserve the Bohal spring shed which would sustain the flow of the spring. The present environmental governance initiative lacks any kind of payment or compensation which covers the cost borne by the locals in conservation. This indicates a disincentive for the upstream villagers to conserve. It also overlooks the power dynamics between stakeholders and the upstream intra-community conflicts which can impede collective action.

The objective of this study is to capture the dynamics between stakeholders, identify potential causes of conflict and collation among various stakeholder in conservation of the Bohal spring shed. The study also analyzes stakeholder's perception of PES and identifies the components of opportunity costs associated with the spring shed conservation in Bohal. These elements are analyzed in terms of their implications for a PES contract between VFDS and PMC

The stakeholder analysis points towards imbalanced power relations between the upstream and downstream stakeholders. It also finds that weak local upstream institutions are inefficient in ensuring participation and creating collective action for conservation. The study finds that despite valuing the cultural and regulating services of the Bohal spring shed, the villagers are not willing to participate in conservation due to the opportunity costs that they are facing. Thus, in order to continue the Bohal spring shed conservation, along with the strengthening of upstream institutions, a PES with higher payments that incorporates villagers' opportunity cost is needed.



Devina Chaturvedi

Title - Unite and Conquer: An inquiry into the effect of society leaders on waste segregation in Delhi-NCR

ABSTRACT

Despite the preventable nature of the problem of solid waste, it continues to be a growing matter of concern for India. Even though Solid Waste Management (SWM) Rules, 2016 made it mandatory for households to practice segregation of waste at source, only a few areas have been able to implement at source segregation by households effectively. There appears to be a gap in the system, preventing the rules formulated at the city level from translating into proper waste management practices being followed at the household level. Given that the problem of waste segregation is that of collective action, this study focused on the role of society leaders in the urban household waste management chain with the goal of understanding the role of society leaders' actions in improving the overall level of waste segregation achieved within the society, in compliance with SWM Rules, 2016. The study looks at the issue at a more aggregate level than individual decision-making in order to shed some light on how to align individual and collective interests. A primary survey of office bearers of more than hundred resident welfare associations in Delhi -NCR was carried out in early 2020 using stratified random sampling. Descriptive statistics and ordered logistic regression analysis reveals that actions by leaders have had a significant effect on the level of waste segregation that has been achieved by the society. Further, opportunities and challenges have been identified for ensuring that full advantage of the role of society leaders' actions in ensuring compliance to SWM Rules, 2016 is taken. It is suggested that RWA leaders can achieve more compliance by making SWM a priority and integrating garbage collectors in the process. Further, urban local bodies should improve training facilities for the RWA leaders and have clear communication to ensure greater compliance.



Gopalika Arora

Title- Bellandur Lake Rejuvenation: An Institutional Analysis of Options

ABSTRACT:

Bengaluru was once known as the city of bountiful lakes but has now turned into a city of vanishing lakes. The puzzle of vanishing ‘urban commons’ sheds light on the complex structure of various relationships that exist which are constantly changing. This makes the governance of these lakes a complex issue. Bellandur is one such lake in Bengaluru which is experiencing overflow of pollution from many sources like residential complexes and industries which has turned into a sewage tank. Despite the involvement of collective action through public participation, there is no positive ecological outcome. This study aims to further understand the institutional dynamics of the lake by using the Institutional Analysis and Development (IAD) framework by Ostrom (2011). It also aims to integrate the preferences of identified group of stakeholders with respect to various institutional, social, economic and ecological factors in coming up with the best suitable intervention for sustained rejuvenation of the lake. The Analytical Hierarchical Process (AHP), one of the most popular Multi Criteria Decision Making Analysis techniques is used to rank the interventions for the goal of long term sustained rejuvenation of the lake. Polycentric governance was the major cause identified behind the lack of co-ordination among authorities. The management authority might be getting decentralized but it is not getting devolved. The intervention which was chosen by the stakeholders was to install Common Effluent Treatment Plants for curbing the problem of industrial effluent discharge that can solve the multi-dimensional problem of pollution.

Keywords: IAD Framework, AHP process, ‘urban commons’, polycentric governance



Himani Jain

Title- Analyzing consumer trust for organic food products in Delhi-NCR

ABSTRACT:

A growing concern among individuals regarding the menace created by unsustainable production and consumption patterns has created a demand for organic food all around the world. The observed shift in demand from conventional to organic food products reflect that consumers have become more conscious about the effect of chemically injected food both on health and environment. But the low levels of purchase frequency for organic food products stand in sharp contrast to the positive attitude and awareness exhibited by urban consumers. This can be attributed to a lack of trust towards the source of supply as well as dissatisfaction concerning availability. Sellers have a better knowledge of inherent qualities of the organic product which aren't easily identifiable by consumers. This leads to the emergence of trust as an important factor in determining not only whether to purchase organic food or not but also where to purchase them from. This study attempts to analyze if certification enables consumers to perceive the quality of the organic food sold in markets of Delhi. To investigate the consumer's intention of purchasing organic-labeled food, an additional construct has been included in the traditional "Theory of Planned Behavior (TPB)". 102 residents of South Delhi were interviewed to study different trust dimensions.

Through path analysis, it is confirmed that along with the traditional constructs, the effect of the proposed construct i.e. "Perceived Quality" is also positive. Certification thus proves to reduce the asymmetry of information between consumers and sellers. Analysis of the purchase behavior suggests that there exist different trust orientations with the choice of channel of distribution. The results will help the policymakers guide their future course of action by providing them information about the preferences of the consumers.



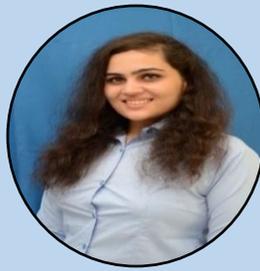
Megha Kapoor

Title- Factors Inhibiting the people of Uttar Pradesh to completely switch to LPG

ABSTRACT:

Choice of energy fuel for cooking and heating purposes is an important subject especially for developing nations, because in these countries majority of the rural population do not use LPG (clean fuels) for their daily requirements. This leads to high emission of hazardous gases. This in particular is more perilous for the women and children since they are the most vulnerable section of the society. Past literature highlights that that affordability is not the only criteria that hinders this switch, but there are other socio-economic factors involved. Most of the literature pertaining to cook stove focuses only on the coverage of cook stoves by the households. By coverage they mean that a particular household is using cleaner fuels like LPG, but they fail to assess how extensively this cleaner fuel is being used. In most of the rural areas of developing nations like India, households usually use a mix of fuels, like LPG and cow dung, or fuel wood, etc. This study aims to look at the factors that inhibit the people of Uttar Pradesh, India to completely switch to LPG, when they can afford this. Due to the affordability criteria, people who cannot afford LPG are excluded from the study. The aim of the study is to find how the presence of cattle and certain characteristics of woman who cooks inhibit the complete switch to LPG. Using multinomial logit model, educational level and health aspect of the primary woman cook came out to be significant. Hence, one can conclude that policies to educate women are more required to bring about a complete switch to LPG.

Keywords: LPG, Improved Cookstoves, Traditional Cookstoves, Female Literacy, Cattle.



Mrigakshi Tandon

Title- Local's Willingness to Contribute Towards the Improved Water Quality of River Yamuna

ABSTRACT:

River Yamuna contributes significantly towards the lives of the people by providing them various goods and services. However, due to increased pollution levels in the river the water quality status has degraded extensively. Even after various government initiatives to clean the river the situation remains the same. One of the reasons behind such failures is lack of community participation.

In reference to the above background, this study tries to estimate the local's willingness to contribute towards the improved water quality of River Yamuna in Delhi using the contingent valuation method, where the contribution can be made either in the form of money, time or both. The study also identifies the factors that will motivate the people's willingness to contribute towards the clean-up program.

A sample of 158 households was collected using the online mode for the study. The results show that the mean willingness to pay for a household comes out to be Rs.58.10 per month, to improve the water quality status towards the moderate scenario (Scenario B) and Rs.97.37 for the best scenario (Scenario C). Whereas the mean willingness to pay in terms of time for a household comes out to be approximately 1 hour for both the scenarios. A multinomial logit regression model was used to identify the factors that have a significant impact on the respondent's willingness to contribute. The factors such as age, gender, marital status, perception scores, and score for future benefits came out to be significant for time, and factors such as perception scores and scores for future benefits came to be significant for money. Based on the results it can be concluded that the local residents attach considerable economic value to the river and are willing to participate in such programs. It is recommended that the decision-makers should carry out educational campaigns to raise more awareness on the issue and involve local residents while implementing the clean-up programs.

Keywords: River Yamuna, Delhi, Community Participation, Willingness to Contribute, Water Quality Improvement



Rithvik Kumar

Title- Evaluating the YSR Aarogyasri Scheme in Management of Diabetes

ABSTRACT:

India has witnessed a wave of Government funded health insurance (GFHIs) schemes in the last decade to take steps towards achieving universal health coverage. The country is also experiencing a rapid increase in the prevalence of diabetes driven by increased incidence among low-income groups. This poses a health and economic risks on the more vulnerable sections of society. This study aims to evaluate the YSR Aarogyasri scheme in Andhra Pradesh for eligible diabetic individuals in the state. This choice was motivated by the high coverage as well as high prevalence of diabetes in the state. The scheme was evaluated with respect to out-of-pocket expenditure, health access and biological outcomes. The study site was narrowed to two subsites in Vishakhapatnam and 92 individuals were chosen in the final sample. Multivariate regression analysis is carried out to model the observable factors influencing outcomes of the sample. Using the propensity score matching technique of impact evaluation, the Average treatment on treated (ATT) was determined for each outcome. The results yielded that the YSR Aarogyasri scheme is attributed to reducing OOPE by INR 14,140. The scheme is also attributed to an increase in the probability of an individual maintaining normal blood sugar levels to the extent of 17.8%. The scheme had no significant effect on frequency of blood glucose monitoring or other diagnostic tests.

Key Words: Diabetes, Aarogyari, Out-Of-Pocket Expenditure, Non-Communicable Disease, Biological Outcomes, Impact Evaluation



Rohan Mahajan

Title- Solar Powered Community Lift and Micro Irrigation Project (SCLMIP): An Impact Evaluation Study

ABSTRACT:

For a farmer living in water scarce areas, micro irrigation can augment their needs by helping them adjust to the low water availability. But what can we do if the farmers cannot access sufficient water for irrigation and micro irrigation techniques ? Such was the scenario in Kandi area in the Hoshiarpur district where Kandi canal is the source of water for irrigation for the nearby farmers. The farmers in the uphill regions were not able to get access to this water as their lands are on a higher elevation than the Kandi canal. The area was mostly rain dependent for its agricultural activities. In 2017, a solar powered project was set up by the Punjab government which pumps the canal water to these uphill farm areas. With sufficient availability of water, it is expected that the farmers would be able to cultivate an increased quantity of crops and are can opt for crop diversification. This study aims to evaluate the economic impact of the project on the beneficiary farm households. The method used to calculate this impact is the Difference-In-Differences (DID) model along with a diversity index as a measure to capture crop diversity. The results show that the project has had a positive and significant impact on the crop production of these farming households, the profits they earn from crop sales, and has improved the diversity in crops that are being cultivated by them. The project has proven to be a boon for the farmers in the Kandi area.



Saloni Agarwal

Title- Travel Choice: A Behavioral Analysis

ABSTRACT:

Humans have harmed the state of the environment that we are living in. The unthoughtful expansion of every activity known has created severe problems for us. One such problem is the hazardous level of air pollution. In one form or another, air pollution claims 4.2 million deaths per year (WHO). It has been primarily recognized that vehicular emissions are a prominent cause of air pollution. The importance of altering travel demand patterns has been recognized to reduce such emissions.

This study tries to determine the transition of societies between various modes of transport in order to understand travel behavior. For this, various fields of study, such as Behavioral Economics, Experimental Economics, and Evolutionary Game Theory, are applied together. This connection would help in capturing those aspects of travel demand that are less explored. By utilizing experimental games and quasi-experimental games approach, the data for the travel behavior characteristics is obtained. These experiments are designed for more than one period to apprehend the essence of transitioning.

The results show that the widespread “herd behavior” was not witnessed in laboratory-controlled settings. In this, the individuals made choices as per their opinion of the situation instead of relying on others. Logit modeling was used to estimate the probability of altering a specific transport choice when faced with the preferences of the peers. A comparison was made between short-distance trips and long-distance trips for a better knowledge of travel behavior. Also, the impact of treatment, such as Visual Aid and Additional Information on decision-making, was observed through the Propensity Score Matching technique.



Sonali Malhotra

Title- Identification of Drivers behind the Expansion of Niche Market for Electric Vehicles

ABSTRACT:

India stands in a need to nurture at a sustainable route of advancement. Worldwide, it has been established that there is a need to shift towards E-mobility in order to accomplish one-step towards reducing carbon-footprints. Electric Vehicles are being thought of as a solution to the problem of pollution emissions caused by vehicles. This research is an effort to assess the features of Electric Vehicles that will guide the shift from Non-Electric Vehicle to an Electric Vehicle. The disclaimers of Electric Vehicles are different from Non-Electric Vehicle thus; it will offer a whole picture of the existing Electric Vehicle technology and will find out the factors for the uptake of an Electric Vehicle. The objective of the study is to assess the attributes of Electric Vehicle that will influence the shift from Non-Electric Vehicle to an Electric Vehicle. It targets to answer, “Which will be the key driver(s) for the shift from Non-Electric Vehicle to Electric Vehicle?”

Exploratory Factor Analysis has been applied for the analyses of the data collected. 5-point “Likert Scale” has been used for collecting responses. The research reveals the inclination of consumers ‘to embrace Electric Vehicle as an upcoming technology and offers preliminary direction to manufacturers in refining their characteristic packages for Electric Vehicles. The study is of significance since there is a strong boost from the government of India again with “Faster Adoption and Manufacturing of Electric Vehicles” (FAME) stage2 scheme for adopting Electric Vehicle and there is insufficient research on this topic in India.

Key Words: EV, EFA, Hurdles, Perception



Srishti Bagadia

Title- Ken Betwa River Interlinking Project: Identifying Its Costs and Benefits

ABSTRACT:

The Government of India proposed a first of its kind infrastructure and a development project in India- a River linking project between Madhya Pradesh (Ken River) and Uttar Pradesh (Betwa River) to solve the various issues in the Bundelkhand region. Any human interference disturbs the ecological balance of the earth and can lead to the degradation of the natural ecosystems around the globe. The ecosystem services are important and crucial for survival on this planet and hence become a necessity to estimate the various economic costs and benefits of these alterations in the ecosystem due to projects like the Ken Betwa River Interlinking project.

The central objective of the research that follows from the above is to analyze the overall feasibility of the project by identifying the net social costs and benefits from the project across selected stakeholders. It was met by using both primary data including questionnaires and secondary data. The methodology the study will follow is the Opportunity cost approach which will be used to capture the cost of conservation and the Benefit transfer approach to value ecosystem services related with the Tiger Reserve. It is found that the opportunity cost of this project is approximately Rs. 6,97,2,471 which is net revenue from agriculture for all seven villages. The project submerging a part of the tiger reserve would lead to an irreplaceable loss of direct use ecosystem services worth 0.84 billion rupees and indirect use services worth 57.15 billion rupees. The present discounted value is positive for most of the villages and negative for two. The result from the study shows that the research can capture the cost of conservation in terms of revenue forgone by utilizing opportunity cost method and is expected to help the concerned authorities on deciding whether the Ken Betwa interlinkage project will be feasible or not.

Keywords: river interlinkage, dam, environmental costs, submergence, agricultural revenue, opportunity cost.



Tarul Jain

Title- The Pavagada Solar Park: ‘Too good to be true?’

ABSTRACT:

Loss of income and livelihoods could be an unexpected ramification of using solar energy. Despite being the cleaner option than coal power plants, most state governments in India have always faced the problem of land availability when it comes to construction of solar parks. This happens in view of the fact of huge parcels of land requirement and associated land acquisition problem for construction of ultra-mega solar parks in India. The massive dependence of livelihoods of rural India on land is the root cause of such a barrier. In order to combat the problem of reluctance of landowners to sell away their land, the Government of Karnataka initiated the idea of land leasing. One such initiative is the 2000 MW Pavagada solar park in the Pavagada taluk of Karnataka. 13,000 acres of land is leased out by 3000 landowners for 28 years in return of a compensation every year. Ultra- mega solar parks are undoubtedly good for the environment, but there is no certainty when it comes to the local and regional impact of such projects. This study addresses whether the land use transition in Pavagada is as good it appears to be, using the Sustainable Livelihoods Framework by DfID (1999). This study is based on the landowners and landless labourers of the Tirumani village in Pavagada taluk. It analyses the change in livelihood capitals- human, social, physical, financial and natural, livelihood strategies (occupation structure) and finally livelihood outcomes- income, consumption and number of working days. It is found that the landowners who have leased out the land have managed to gain the most, resulting in sustainable form of livelihoods for them. Conversely, landless labourers have an unsustainable livelihood by virtue of increased vulnerability due to the loss of livelihoods because of the land use change. There is also evidence of an increased gender inequality in distribution of income and job opportunities. The land use change from agriculture to solar park in Tirumani, Pavagada has escalated economic and social discrimination. As a consequence of which the overall livelihoods of the local people has taken an unsustainable turn. Voluntary land leasing from the landowners along with the national and international benefits pertaining from solar energy, makes the land use change from agriculture to solar park in Pavagada a too good to be true reality.

Keywords: Solar parks, sustainable livelihoods, land use change



Tavisha Dua

Title- Opportunity cost for the conservation of Sea turtles: A study in Odisha

ABSTRACT:

Bio-diversity comprises of all the species of animals, plants or systems that we see around us. It gives us an idea about the health of our ecosystem. Most living organisms can survive on their own if they are not disturbed by human activity. Sea Turtle are facing various anthropogenic threats and there is a need to conserve them. As per the IUCN red list of threatened species, six out of the seven species of sea turtles are endangered/critically endangered. This study focuses on the coastal region of Odisha. More than 800,000 females are seen nesting on the coast of Odisha. The most important nesting sites in Odisha are Gahimatha, Devi river mouth and Rushikulya. Since there is a room for a lot of improvement at the Rushikulya river mouth, this would be our chosen study site. The objective of this paper is to conduct an opportunity cost analysis and find the opportunity cost for the conservation of Olive Ridley Sea turtles at the Rushikulya Rookery of Odisha. The threats and the stakeholders relevant to the chosen study site were identified on the basis of a literature review and a primary field survey. The opportunity cost was calculated on the basis of the data that was collected regarding the loss in income due to conservation measures. Total opportunity cost for the conservation of sea turtles in the Rushikulya rookery came out to be Rs. 187 crores. The WTP for sea turtle conservation is positive and significant. If this is the case, then we know that we can rely on public's contribution to fund our conservation costs. Policy measures such as a tax/surcharge can be imposed on the tourists who are visiting the nearby areas. Import duty can be imposed on the shrimp importing countries to cover the opportunity costs faced by the fishermen.

Key words: Turtle, Odisha, WTP



Yashi Puri

Title- Analysing the costs of different alternatives of highway construction through Aravalli Biodiversity Park, Gurgaon

ABSTRACT:

The Aravalli Biodiversity Park (ABP) in Gurgaon is an urban forest of NCR which has around 300 native plant species and is a habitat for around 196 migrant bird species. The park is crucial for the existence of various biodiversity and ecosystem services such as carbon sequestration, air pollution sink, groundwater recharge, habitat for migrant species. It is a home for a number of endangered species. There has been a proposal from National Highway Authority of India (NHAI) of building a new road connecting NH8, NH 236 (MG Road) and Faridabad Road passing 1.5 Km through the Aravalli Park to reduce congestion on NH8 at Signature Tower, IIFCO Chowk and Rajeev Chowk. It will decongest 26 Km long section of NH8 between Ambience Mall and NSG Gate and will allow traffic from MG Road to bypass entire Gurgaon. The main objective of the study is to ascertain cost-minimizing alternatives of the construction of highway through ABP. More precisely, the study addressed the following research question “Does economic and ecological costs from construction of a highway outweigh the costs of not having the highway through Aravalli Biodiversity Park?”

We estimated the economic and ecological costs from the construction of highway and compared it with the no highway case. In conceptual terms, opportunity cost approach was followed for economic ones, which is to find out the additional costs incurred by the economic agents in either case to avail the next best alternative. The data regarding the ecological costs were collected through semi-structured questionnaire in the form of personal interviews. The analysis was carried out by looking from the cost-effectiveness approach. The three alternatives of the project- one where highway construction takes place (either through the surface or tunnel) and the other without any construction were considered and the relevant costs from these three scenarios were captured to arrive at the cost-minimizing alternative. The findings from the study were that the research was able to capture the different costs related to all possible options of construction of highway across different stakeholders. The cost-effectiveness analysis results show that the least cost alternative turns out to be the case when highway passes through an underpass.

Key Words: - biodiversity park, highway, opportunity cost, cost-effectiveness analysis, ABP.