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Estimating the global distribution of field size using crowdsourcing

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Abstract

There is an increasing evidence that smallholder farms contribute substantially to food production globally, yet spatially explicit data on agricultural field sizes are currently lacking. Automated field size delineation using remote sensing or the estimation of average farm size at subnational level using census data are two approaches that have been used. However, both have limitations, for example, automatic field

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size delineation using remote sensing has not yet been implemented at a global scale while the spatial resolution is very coarse when using census data. This paper demonstrates a unique approach to quantifying and mapping agricultural field size globally using crowdsourcing. A campaign was run in June 2017, where participants were asked to visually interpret very high resolution satellite imagery from Google Maps and Bing using the Geo-Wiki application. During the campaign, participants collected field size data for 130 K unique locations around the globe. Using this sample, we have produced the most accurate global field size map to date and estimated the percentage of different field sizes, ranging from very small to very large, in agricultural areas at global, continental, and national levels. The results show that smallholder farms occupy up to 40% of agricultural areas globally, which means that, potentially, there are many more smallholder farms in comparison with the two different current global estimates of 12% and 24%. The global field size map and the crowdsourced data set are openly available and can be used for integrated assessment modeling, comparative studies of agricultural dynamics across different contexts, for training and validation of remote sensing field size delineation, and potential contributions to the Sustainable Development Goal of Ending hunger, achieve food security and improved nutrition and promote sustainable agriculture.

KEYWORDS

crowdsourcing, environmental changes, field size, food security, visual interpretation

1 | INTRODUCTION

In 2015, Fritz et al. (2015) published the first global field size map at a 1 km² resolution, which was generated through interpolation of around 13 K field size samples collected using the Geo-Wiki crowdsourcing tool. Such an approach was possible as a result of the increasing availability of very high resolution satellite imagery from Google Earth from which agricultural field boundaries could be identified in detail, particularly those of smallholder farms. This field size product generated a considerable amount of interest because spatially explicit information on field size at a global scale is currently lacking. As a consequence, this product was used in a number of studies. For example, Samberg, Gerber, Ramankutty, Herrero, and West (2016) mapped mean agricultural area (MAA) by subnational administrative units for Latin America, Sub-Saharan Africa, and South and East Asia using household census data, where field size was found to be a significant predictor in the MAA model. Herrero et al. (2017) examined the relationship between farm size, agricultural production, and nutritional diversity where the global field size map was used to allocate agricultural production to different farms sizes at the country level. The results showed that small- and medium-sized farms produce up to 77% of all commodities and nutrients considered, particularly in Sub-Saharan Africa, Southeast Asia, South Asia, and China. The majority of global micronutrients and protein are also produced in more diverse agricultural landscapes, so as farm sizes increase, production diversity must also be maintained to ensure diverse nutrient production.

Both of these studies are part of a larger debate on the role of farm size in global food security (Meyfroidt, 2017), where farm size is related to field size (Graesser & Ramankutty, 2017). For example, an overall farm size may not change due to lack of capacity for expansion but a farmer may increase their existing field sizes. Hence, field size is an important indicator of agricultural intensity, for example, to gain a better understanding of management practices, or to monitor biodiversity and landscape fragmentation. Yet, there is considerable uncertainty concerning estimates of the amount of agricultural land within different field size categories, particularly smallholdings. Using census data from the Food and Agriculture Organization (FAO), Lowder, Skoet, and Raney (2016) estimate that 84% of the 570 million farms globally are <2 ha in size, which represents around 12% of agricultural land. More recently, Ricciardi, Ramankutty, Mehrabi, Jarvis, and Chookolingo (2018) found that farms <2 ha in size occupy 24% of agricultural gross area based on agricultural census data and different surveys from 55 countries. Graeb et al. (2016) estimate that family farms cover 53% of agricultural land but these farms can include field sizes of >2 ha since the definition of family farm is not based on field size. Hence, this number is not directly comparable with Lowder et al. (2016) or Ricciardi et al. (2018). No other estimates exist, and hence, there is a clear need for spatially explicit data on the distribution of field sizes, which can provide an independent estimate to that derived from FAO census data or nationally (or subnationally) representative sample surveys.

Another approach to mapping field size is to use remote sensing. For example, Yan and Roy (2016) developed an automated crop field extraction method which they applied to 30 m Web Enabled Landsat data (WELD) time series to produce a wall-to-wall field size map for the contiguous USA (Yan & Roy, 2016). Graesser and Ramankutty (2017) developed a semi-automated approach involving edge extraction and adaptive thresholding to produce a field size map for five countries in South America. Although the results from both studies were good, that is, accuracies of >84%, both of these studies are limited in geographical coverage and concern areas where field sizes are large with a relatively precise geometry (square or round) in comparison with fields in other parts of the world. Therefore, to map fields globally using remote sensing would require adjustment for the high variability of field geometry in places such as Africa as well as considerable processing power.

An alternative approach to the use of remote sensing or census-based spatial disaggregation (Samberg et al., 2016) is the crowdsourcing method outlined originally in Fritz et al. (2015). At the time, around 13 K samples were collected using four categories: very small, small, medium, and large, where the definitions were based on simple rules of thumb to aid visual interpretation rather than area-based estimates. As field size estimation was not the focus of the campaign, the sample collected was limited in size. A simple interpolation method was then applied to produce the global field size map. Although the general patterns of field size were captured globally, there were numerous artifacts from the interpolation method when viewing the map in more detail, and limitations were recognized at a national level, for example, underestimation of small fields in Argentina (Graesser & Ramankutty, 2017). Hence, there was a clear need

to improve this map with a much denser sample and apply a more appropriate interpolation algorithm. To achieve this objective, a new Geo-Wiki campaign was run in June 2017, focused entirely on the collection of field size data, which increased the density of field size samples by an order of magnitude, that is, around 130 K unique samples were collected. Although crowdsourcing and citizen science are becoming popular ways of collecting data, for example, through the eBird project (Sullivan et al., 2014) or Zooniverse (Reed et al., 2013), assuring data quality still remains the most critical issue in this field (Comber, Mooney, Purves, Rocchini, & Walz, 2016; Fonte et al., 2017; Resnik, Elliott, & Miller, 2015; Salk, Sturn, See, Fritz, & Perger, 2016; See et al., 2013). To address this issue, we have improved the quality control mechanism and introduced field measuring tools to improve the accuracy of the data collected. Hence, with these improvements, it is now also possible to estimate the percentage of different field sizes at a global and continental scale as well as nationally. The aim of this paper was to present the improved global field size map and to compare estimates of different field sizes derived from the field size sample with those currently found in the literature. The field size samples are also available from this site, which can be used for training or validation of automatic field size classification algorithms or identifying priority areas for mapping, for example, where there is a high variability in field sizes.

2 | MATERIALS AND METHODS

Figure 1 provides an overview of the main steps undertaken in this study, which includes (a) collection of the global field size data via a crowdsourcing campaign; (b) mapping of the dominant field sizes; (c)

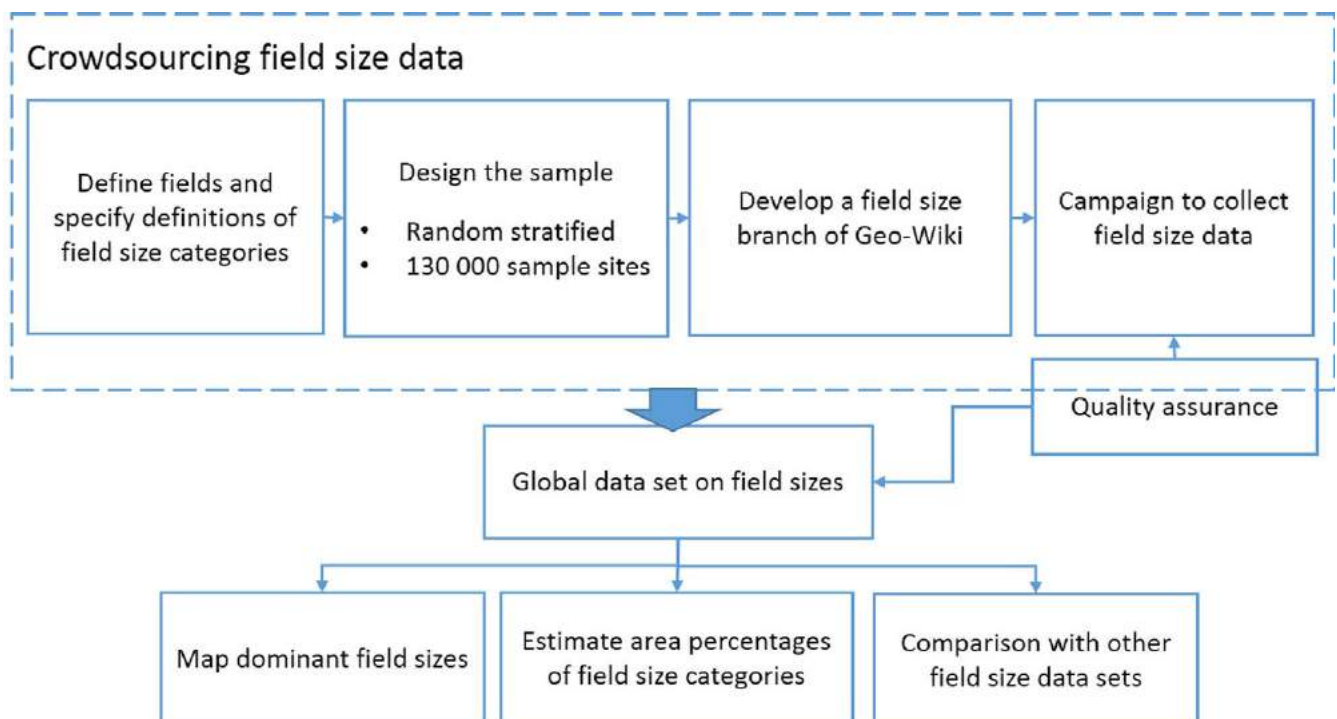


FIGURE 1 Schematic showing the main steps in the methodology [Colour figure can be viewed at wileyonlinelibrary.com]

estimation of the area percentages of the different field size categories; and (d) comparison of the crowdsourced data with other field size data sets. These steps are described in more detail in the sections that follow.

2.1 | Collecting global field size data via crowdsourcing

To collect information on field size globally, we designed and implemented a crowdsourcing campaign that lasted 4 weeks during June 2017. As outlined in Figure 1, the campaign consisted of a series of steps including the specification of fields and field size categories, the design of a global sample, the development of a new branch of Geo-Wiki that focused specifically on field sizes, and the actual running of the campaign. The quality assurance process was also a very important part of the campaign. These four steps and the quality assurance process are described below.

2.2 | Specification of field and field size definitions

The first definition needed was for a “field”. We defined fields as enclosed agricultural areas, including annual and perennial crops. We also included pastures, hayfields and fallow in the definition to minimize confusion between annual crops and pastures when visually interpreting the images. This definition corresponds to the Food and Agriculture Organization of the United Nations (FAO) definitions of arable land and permanent crops (FAO, World Bank, & United Nations Statistical Commission, 2012), with an exception that we also included permanent pastures.

We then defined rules for determining individual fields, which are usually separated by roads, permanent paths, trees, or shrub shelterbelts. Field boundaries can be further defined by the presence of different crop types or pastures. Temporary paths or signs of machinery are not considered as field boundaries.

Finally, we defined five field size categories. These were based on the crowdsourced results from the 2011 campaign that included field size (Fritz et al., 2015) as well as the field size definitions provided by the Group on Earth Observations Global Agricultural Monitoring Initiative (GEOGLAM - https://ceos.org/document_management/Meetings/SIT/SIT-28/31b_GEOGLAM_Global_Agricultural_Monitoring_User_Requirements_March4.pdf). The field size categories were then adjusted to the Geo-Wiki grid approach that we describe below. These categories are:

- Very large fields with an area of >100 ha;
- Large fields with an area between 16 and 100 ha;
- Medium fields with an area between 2.56 and 16 ha;
- Small fields with an area between 0.64 and 2.56 ha; and
- Very small fields with an area <0.64 ha.

2.3 | Sampling design

We generated a random stratified sample of 130,000 sites globally. This number was based on how much data were collected during

past campaigns, the potential number of participants we could engage, and the optimal duration of the campaign. Each sample site was visited by three different participants, so in total, there were 390,000 classifications to complete.

To stratify and hence better allocate the sample units, we developed a layer of maximum agricultural extent. We selected maps that contain agricultural fields that either fully match the definition of fields used in this study or partly match, that is, they contain a subset of the definition, which include:

- A cropland layer derived from Globeland 30 at a 30 m resolution (Chen, Ban, & Li, 2014);
- A cropland layer derived from the ESA CCI LC map at a 300 m resolution for 2015 (<https://www.esa-landcover-cci.org/>);
- The unified cropland layer at a 250 m resolution (Waldner et al., 2016);
- The IIASA-IFPRI hybrid cropland layer at a 1 km resolution (Fritz et al., 2015).

Since our definition of fields is very broad, there was no need to harmonize the cropland definitions of these different layers.

The four maps were then aggregated to the same grid as that of the IIASA-IFPRI hybrid cropland map (Fritz et al., 2015). The rule we followed was that if a pixel contained cropland in at least one of these layers, the pixel was considered as cropland. To avoid oversampling with a change of latitude, we re-projected the aggregated map from WGS84 to an equal area projection (i.e., the Goode Homolosine projection) and randomly distributed the samples by continent.

2.4 | The Geo-Wiki application for field size data collection

Geo-Wiki is an online application for crowdsourcing visual interpretations of satellite imagery from Google Maps and Microsoft Bing, for example, land cover, human impact, forest cover, which has been used in a number of data collection campaigns over the last several years (Fritz et al., 2012; See et al., 2015). Google Maps and Microsoft Bing Maps include mosaics of very high resolution satellite and aerial imagery from different time periods and multiple image providers, from Landsat satellites operated by NASA and USGS to commercial providers such as Digital Globe. More information on the spatial and temporal distribution of very high resolution satellite imagery can be found in Lesiv et al. (2018). The maps are used as the underlying layers for visual interpretation, where users could choose between them based on the quality of the imagery.

A new branch of Geo-Wiki is normally implemented for each new campaign including this recent one devoted to the collection of field size data. Much of the satellite imagery in Google Maps and Bing is very high resolution imagery, ranging from 50 cm to a few meters, which allows field boundaries to be identified with a high precision. Figure 2 is a screenshot of this Geo-Wiki field size interface, showing additionally the tools (a-l) that were implemented to facilitate field size estimation and general data collection.



FIGURE 2 Screenshot of the Geo-Wiki interface showing: (a) the area measuring tool; (b) the actual field sizes delineated and measured using (a); (c) the cumulative work done by a participant; (d) the main classification area, gridded; (e) the button to switch between different background imagery, that is, Google or Bing; (f) buttons to select the field size categories: very large, large, medium, small, very small, or no fields; (g) possible reasons to skip the current location; (h) a button to display location in Google Earth; (i) examples of field size estimation for training; (j) a button to ask experts for help. Source of imagery: Google Maps [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/gcb.14492)]

Before starting the campaign, the participants were shown a series of slides designed to help them gain familiarity with the interface and to train them in how to visually determine and select the most appropriate field sizes for each given location. Once completed, the participants were then shown a random location on the Geo-Wiki interface and were asked the following two questions: (a) what field size categories do you see in the red box; (b) what is the dominant field size, that is, the field size category corresponding to the fields with the highest total area covered in the red box (Figure 2d). The red box represents an area of 16 ha divided into 25 grid cells. If the user selected more than one field size, they were asked to indicate which of these was dominant. The area measuring tool (Figure 2a,b) allows participants to delineate the fields manually to calculate the sizes. Participants were encouraged to quickly do a visual identification of field sizes, without measuring them, using the grid system (Figure 2d), where yellow cells are 80×80 m or 0.64 ha, the red box is 400×400 m or 16 ha, and the blue box is 1×1 km or 100 ha in size. The field sizes were determined as follows:

- Very small: fields smaller than the yellow cells;
- Small: fields of a size between one yellow cell and four yellow cells (2.56 ha);
- Medium: fields smaller than the red box (16 ha) and bigger than four yellow cells;
- Large: fields smaller than the blue box (100 ha) and bigger than the red box; and
- Very large: fields larger than the blue box.

When the field size was not clear from visual inspection, for example, when a field was close in size to two categories, participants were encouraged to use the area measuring tool (Figure 2a). Alternatively, if either no imagery was available, or if it was deemed too difficult to determine the field sizes, the participant could skip a location (Figure 2g). If a location was skipped because of being too difficult, such a location would still have been available for other participants, whereas in the case of the absence of imagery in both the underlying layers, that is, Google Maps and Microsoft Bing Maps, this location was taken out of the sample of available locations. In the case of Microsoft Bing Maps, the imagery is not complete, which only becomes apparent when you zoom into the maximum extent. In the case of Google Maps, this occurs when there is a lack of very high resolution imagery and you zoom into the maximum extent. If you zoom out, you will see the Landsat base imagery but it will not be possible to identify the field sizes unless they are very large.

2.5 | Quality assurance

Insights from our previous crowdsourcing campaigns (Fritz et al., 2012; Laso Bayas et al., 2016) indicated that we needed to invest in the training of the participants, where there were 130 in total. Summary information about the participants (i.e., their gender, age, level of education, and country of residence) who filled in the survey at the end of the campaign is provided in the Supporting

information; Figures S4, S5, S6 and Table S2. In this campaign, we provided initial guidelines for the participants in a form of a video and slides that were shown before the participants could start classifying the field sizes (see Supporting information Figure S1). Additionally, the participants were asked to classify 10 training samples before contributing officially to the campaign. They received text-based feedback on each of these 10 samples including the measured field size categories, with the possibility of watching an explanatory video for each location showing how these field sizes were selected (Videos and explanations available here: https://www.geo-wiki.org/Application/modules/field_size_sigma/FieldSizeSigma_gallery.html).

During the campaign, the participants were shown a sample site that was part of a "control" or expert data set, which appeared randomly during every 10 classifications. When these sites were incorrectly classified, the participants received text feedback, which is an innovative component that we used for the first time in a crowdsourcing campaign. Our hypothesis behind this approach was that by receiving immediate feedback on a submitted classification, a participant would learn from their mistakes and the quality of their work would increase over time. If the text-based feedback was insufficient, the participants could ask for more detailed explanation by email (Figure 2-l).

The control sample set was independent of the main sample of 130,000 sites, and it was created using the same random stratified sampling using maximum agricultural extent as the strata. To determine the size of the control sample, two aspects were considered (a) taking into account the complexity of this task and our past experience with campaigns, the maximum number of sample sites that one person could complete is 40,000 locations; (b) the frequency at which the control sample sites were provided to the participants. Since we decided that a control sample site will appear once every 10 classifications, we needed 4,000 control sample sites ($40,000/10 = 4,000$) in total. The control sample sites were classified by a small group of experts trained by the lead author at IIASA. Each control sample site was classified twice by two different experts. Where the two experts agreed, these sample sites were added to the final control sample. Where disagreement occurred (approximately 25% of cases), these sample sites were inspected by an IIASA expert and revised accordingly. Only then was it added to the final control sample.

Part of the campaign design was to offer prizes as one incentive for participation. The ranking system for the prize competition was partly linked to the quality of individual contributions (Supporting information Table S1). Whenever a location visited by a participant was a control sample site, the participants received some points that accumulated over the campaign. In the design of the ranking system, we considered both the quality of the classifications and the number of classifications by a participant. These rules indicate how the points (P) were calculated:

- Case 1. A sample site with fields present. The following equation was applied:

$$P = 20 - D * 10 - E * 5 \quad (1)$$

where D indicates whether the dominant field size is correct (1) or incorrect (0) and E is the total number of mistakes made in identifying the field sizes. Two types of mistakes were considered: (a) if the wrong field size was identified; and (b) if the correct field size was not identified.

- Case 2. A sample site with no fields present. The following rule was applied:

$$P = P + 20, \text{ if correct, and } P = P - 10, \text{ if wrong} \quad (2)$$

- Case 3. No imagery or very low resolution images in Google and Bing. In this case, Equation (2) was applied.

The maximum amount of points awarded was 20 while the maximum number of points deducted was 15. By awarding 10 points for a correct dominant field size, we emphasized the importance of this question. The relative quality score for each participant was then calculated as the total sum of points gained divided by the maximum sum of points that this participant could have earned.

For any subsequent data analysis, we excluded classifications from those participants whose relative quality score was <71.4%. This threshold corresponds to an average score of 10 points at each location (out of maximum 20 points), that is, these participants were good in defining the dominant field sizes. In total, we removed 10,995 classifications from 32 different participants, or 2.8% of all classifications.

Additionally, since each sample site was visited by three different participants, we calculated the variability of the dominant field size categories as follows: (a) full agreement, or all three participants were in agreement; (b) medium agreement, or only two participants agreed; (c) low agreement, or the three participants identified three different dominant field sizes.

2.6 | Creating a global field size map

The first global field size map was produced by interpolation of field sizes (Fritz et al., 2015). Inverse distance weighting (IDW) was chosen as the interpolation method. As with many other interpolation methods in spatial statistics such as kriging or nearest neighbor, IDW assumes that pixels close by to one another have similar values. However, this assumption does not hold for the spatial distribution of fields, for example, large fields may be neighboring smaller fields. Therefore, we adapted the nearest neighbor approach as follows:

- A grid of points was created with an interval of circa 1 km, which is also the minimum distance between the sample sites;
- At each grid point, k nearest neighbors was applied to the crowdsourced data set where $k = 5$ was found to yield the best visual representation; more than five neighbors led to a loss in spatial

information while <5 neighbors resulted in the overestimation of field sizes that were not dominant.

At each grid point we then summed all the answers from the participants to determine the most frequently selected field size category. If there were field size categories with the same frequency, we removed the values located at the largest distance away from the grid point and repeated this step until we arrived at one dominant field size category. We only applied this procedure to grid points that fell inside cropland areas, where we used a recent cropland map for 2015 to indicate cropland areas (<https://www.cropland.s.org/app/map?lat=0&lng=0&zoom=2>), which was originally at a 30 m resolution and then aggregated to our grid size.

The maximum distance from each grid point to the nearest neighbors from the crowdsourced data set varied from 3 to 20 km. This means that the final map of dominant field sizes is a map that shows field sizes that are dominant over a certain area, for example, within a radius of 3 km. To have finer boundaries for fields, users can apply the 30 m meter cropland mask. However, this does not mean that the dominant fields were determined at this spatial resolution.

To evaluate the accuracy of the resulting map, we compared it with the control sample. If any of the fields identified by the experts matched a pixel value on the field size map, this classification was considered to be true; otherwise, there was no match.

2.7 | Estimation of the area proportions of different field size categories

The area proportions were calculated from the sample and not the field size map. Therefore, we needed to calculate the dominant field size at each sample site, where each sample site was interpreted by three different participants, each of which had a relative quality score. Hence, to determine the dominant field size at each sample site, we applied a simple weighting approach using the field size answers and the relative quality scores (Foody et al., 2018), and removed sample sites with no fields. Moreover, 2.5% of the sample sites were deemed impossible to classify by the participants due to low resolution imagery, clouds or the absence of imagery. These sample sites were also excluded from the calculations of the area proportions. This 2.5% represents a bias in our later calculations.

We used the resulting data set on dominant field sizes to calculate the agricultural area proportions at the global, continental, and national levels. To calculate the 95% confidence intervals, we followed the methodology described in (Sangeetha, Subbiah, & Srinivasan, 2013). The global administrative unit layers (GAUL) of FAO (<https://www.fao.org/geonetwork/srv/en/main.home>) were used to determine the country and continent of each sample site. Note that these calculations at global level were made assuming that no changes in field sizes have occurred over the period 2010–2016. Indeed, there are homogenous patterns of imagery dates for a few countries, for example, Canada, Peru, Ecuador, Columbia, and Ukraine (Supporting information Figure S2).

2.8 | Comparison with other field size data sets

We compared the crowdsourced field size data set with a field map for the USA for 2010 produced by Yan and Roy (2016), which was derived from Landsat imagery at a 30 m resolution. This is an openly available wall-to-wall map of fields for the United States. To compare this field map with the crowdsourced data set, the following caveats should be noted:

- Individual fields in the US field map are those that are separated from each other by roads or shelterbelts with a width of at least 30 m. Hence if fields are separated by a tiny road, for example, 2–3 m wide, they would most likely be classified as one field. An example is shown in Figure 3 where the US field map shows the presence of very large fields (on the left) while the dominant field size from this study would be large. This can be verified from the satellite imagery on Google Maps (shown on the right).
- Very small and small fields are not mapped as the resolution is too coarse.
- It includes only arable land, no pasture and no hayfields.
- The smallest detected fields have an area of 1.53 ha.

First, we calculated the area of the mapped fields and converted these values into the field size categories defined in this study. Secondly, we selected sample sites from the crowdsourced data set that fall within the mapped fields and extracted the field sizes. We then calculated a confusion matrix (crowdsourced dominant field size vs. size of the mapped fields). To calculate overall agreement, we assumed that both data sets agreed when fields on the fields map were larger than the crowdsourced field sizes.

2.9 | Software

The field size data were collected through the Geo-Wiki web application as described previously. All the data analyses, including mapping field sizes and estimating the area proportions of the field sizes, were done in the R environment. Bar charts were also produced in R. The following R packages were used: raster 2.6–7 (<https://CRAN.R-project.org/package=raster>); RANN 2.5.1 (<https://CRAN.R-project.org/package=RANN>); and sp 1.2–7 (<https://CRAN.R-project.org/package=sp>). The figures showing the spatial distribution of the field sizes were prepared in ArcGIS 10.1.

3 | RESULTS

3.1 | A new global field size data set

The main result of this study is a global field size data set containing all the detected field sizes and the estimated dominant field size. Figure 4 shows the spatial distribution of dominant field size categories. African countries such as Ethiopia, Tanzania, Mali, Nigeria and others, along with India, China, and Indonesia are characterized by very small fields. On the other end are Kazakhstan, Australia, the



FIGURE 3 An example taken from the field map of the USA (Yan & Roy, 2016). Left image: blue indicates very large fields, green are large fields, and turquoise are medium-sized fields. Right image: screenshot of a satellite image from Google Maps from 2010, where the blue lines correspond to tiny field boundaries that are not taken into account on the field map of Yan and Roy (2016). The location of the central point is 95.771°W, 42.975°N [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/gcb.14492)]

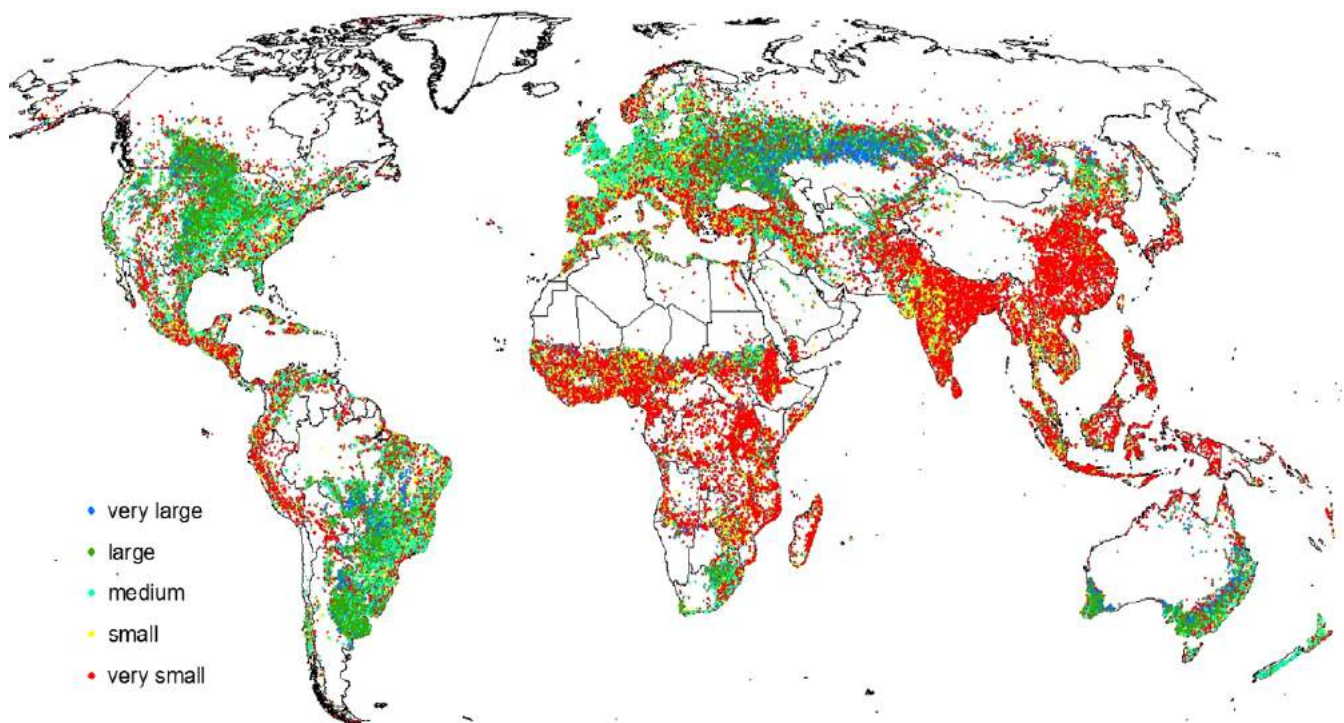


FIGURE 4 The spatial distribution of dominant field size [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/gcb.14492)]

USA, and Brazil with very large fields. In Europe, the majority of the fields are of a medium size. Figure 4 also highlights areas with high variability in field sizes, for example, Europe, Turkey, central India, northern regions in China (at the border with Russia), Nigeria, Sudan, Zambia, and the northern states of Brazil.

To establish the quality of the data set, we estimated the agreement between the participants in terms of dominant field size

category at each sample site (we had three classifications per sample site). Overall there was complete agreement between participants in 56% of sample sites, the majority of participants agreed in 40% of cases while complete disagreement occurred in only 4% of sample sites. Figure 5 shows the spatial distribution of this agreement, which shows no discernible patterns in the distribution of sample sites where complete disagreement occurs. We selected a few

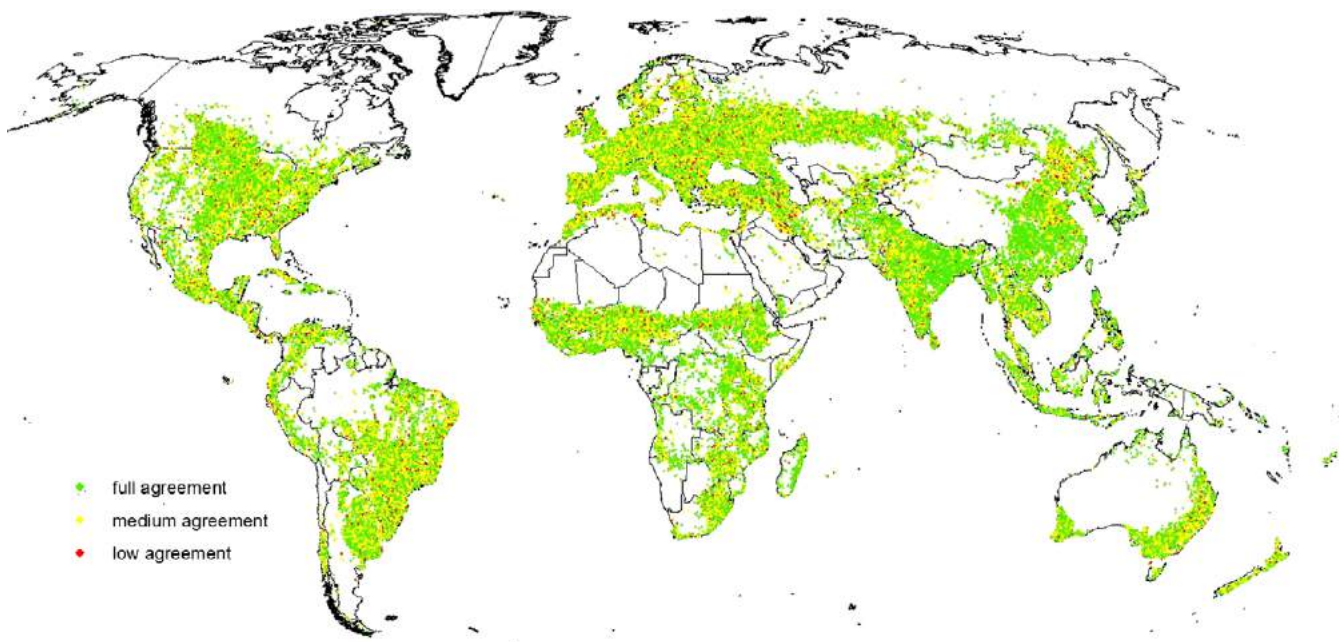


FIGURE 5 The degree of agreement between the participants at all sample sites [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/gcb.14492)]

sample sites where the participants disagreed and found that these are mostly located where fields have different sizes and it is difficult to identify a dominant one.

3.2 | Map of dominant field sizes

The map of dominant field sizes is presented in Supporting information Figure S3 since the distribution of dominant field sizes look very similar in overall pattern to that of Figure 4. The overall accuracy of the map was estimated to be 93%. More details on how this number was estimated are provided in the methodology section.

3.3 | Percentage of agricultural area by field size

For better presentation of the results, we translated area proportions to area percentages. Figure 6 provides the results of the agricultural area estimates by field size at global and continental levels. These results confirm that very small fields sizes have a substantial share in the total agriculture of Asia and Africa while large fields clearly dominate in Australia and North and South America. Medium field sizes have the same percentage as large fields for European countries, which is mainly due to inclusion of post-Soviet countries such as Ukraine and Russia.

Figure 7 shows the cropland area percentages for selected countries, sorted by size. Kazakhstan is the only country with a huge share of very large fields. In general, large fields dominate in post-Soviet Union countries, in the USA, Brazil, Australia, Argentina, Canada, and South Africa. As mentioned already, countries in Central and Western Europe have medium field sizes. Countries such as India, China, Nigeria, Ethiopia, Tanzania, Indonesia, and Pakistan are characterized by dominant smallholder farms or family farms.

The results of all the calculations are provided in the Supporting information (Table S3).

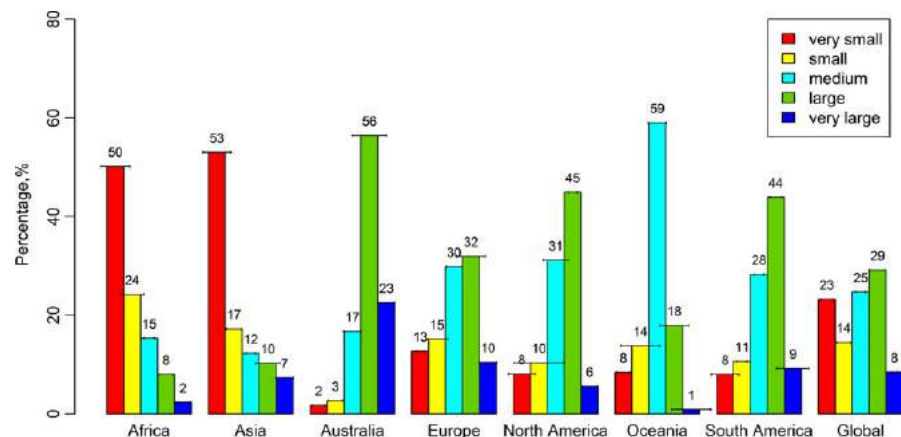
3.4 | Comparison with the US field map

We compared the field map for the USA (Yan & Roy, 2016) with the dominant field sizes estimated in this study given the set of caveats outlined in the methodology. The overall agreement between the two data sets is 66.0% and 92.2% if we assume that fields on the US fields map contain smaller fields delineated by tiny paths. Supporting information Table S4 contains a confusion matrix between the US field map and the crowdsourced data. It demonstrates where there is confusion, for example large fields in the US field map contain a few medium fields and very large fields consist of large fields. The highest "wall-to-wall" agreement is for large fields.

3.5 | Comparison of the results with other estimates

Finally, we compared our results with other estimates in the literature. However, to compare these estimates with our results, we consider that a smallholder farm may include many very small fields with an area of <2 ha and a few small fields. Thus, according to our results, smallholder farms occupy a maximum of 40% of total agricultural area, which is considerably larger than the figure of 12% reported in Lowder et al. (2016). The share of smallholder farms is much higher in Asia (~70%) and Africa (up to ~74%), which is considerably higher than estimates provided in Wu et al. (2018, fig 2C), based on the same data as that used by Lowder et al. (2016). In contrast, our results are smaller than the estimate of 60% reported in Cui et al. (2018) but the latter figure cannot be traced to the original

FIGURE 6 Area percentages of different field sizes by continent and at the global level (confidence interval 95%). Oceania includes New Zealand, Melanesia, Micronesia, and Polynesia [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/gcb.14492)]



cited source so there is huge uncertainty around the veracity of this figure. Our results are closest to the estimate of 24% provided by Ricciardi et al. (2018), but this figure is only based on data from 55 countries and the definition of agricultural land does not include permanent pastures while our definition does.

4 | DISCUSSION

The results from this paper make a significant contribution to the current knowledge on the spatial distribution of different field sizes globally. First, the results are independent from FAO census data and are not related to household surveys. Secondly, the data are more detailed and spatially denser than the previously collected data set on field sizes (Fritz et al., 2015), with additional temporal information. Thirdly, we have considerably improved the quality of the data collected by providing detailed guidelines to the participants, area measuring tools, multiple classifications per sample site, near real-time feedback, and ranking based on the quality performance of each participant.

The global field size data set presented in this study can be considered as a fundamental benchmark for the distribution of field sizes. It could be used to expand the research study undertaken by Samberg et al. (2016) to the global level as well as enhancing the work on food and nutrient security (Herrero et al., 2017). Since we recorded the dates of the underlying satellite images (Supporting information Figure S2) used in the visual interpretation, this data set may serve as training data for automated classification of field size from remote sensing (although only for field size categories introduced in this study). The temporal reference is crucial in mapping fields as their shape and size change over time due to different socio-economic factors (Yan & Roy, 2016). Only in the areas with very fragmented or hilly landscapes do field sizes remain small or very small over time, for example, in the mountain region of Italy, the south of China. Additionally, the data set could also guide the choice of which sensor to use for agricultural monitoring and crop type classification, for example, for heterogeneous regions and regions with very small fields, there is a need for a finer resolution sensor such as Sentinel-2 data at a 10 m resolution.

By interpolating the global field size data set using a method more appropriately suited to the data set, we produced a better global field size map than the previous version (Fritz et al., 2015). This map could be used as an input layer to global land use models or global integrated assessment models, for example, the EPIC (Environmental Policy Integrated Model) or GLOBIOM models (Havlík et al., 2014). To improve the spatial disaggregation of cropland types, this field size layer could also be used as a covariate in the Spatial Production Allocation Model (SPAM) (You et al., 2014).

This study has also addressed the question of what proportion of agricultural area different field sizes occupy at the global, continental, and country level. Our findings confirm that small fields have a substantial percentage at the global level: very small fields with an area <0.64 ha occupy 23.23% while small fields (with an area between 0.64 and 2.56 ha) occupy 14.47% of total agricultural areas (or 40% in total if we count the bias of 2.5%). Although the comparison with the US field map (Yan & Roy, 2016) showed a 92.2% agreement with the crowdsourced data set, there are no other studies that have calculated the percentage of field sizes at the global level. There are a few studies on the distribution and percentage of different farm sizes but field size and farm size are not the same thing as discussed in the introduction. Moreover, farm sizes cannot be defined by taking only the area of land owned into account (Graeb et al., 2016), as this varies between country. Nevertheless, FAO defines smallholder farms as farms with agricultural areas of <2 ha. Reports on the percentage of smallholder farms in total agricultural areas vary considerably, for example, 12% in Lowder et al. (2016) up to 60% in Cui et al. (2018). Moreover, Lowder et al. (2016) include permanent pastures in their estimates, as we do, while Ricciardi et al. (2018) do not, yet report an estimate of 24% smallholder farms. However, we expect that non-permanent pastures will have a rather small share in our estimates of area proportions. We did not look at this particular aspect in this study because it would have complicated the task undertaken by the crowd and, consequently, would have increased the uncertainties in our results. If there were an accurate global layer of cropland and permanent pastures, separated from each other, we could have excluded non-permanent pastures from our calculations and could have estimated area proportions for croplands, for permanent pastures, and for croplands together with permanent pastures.

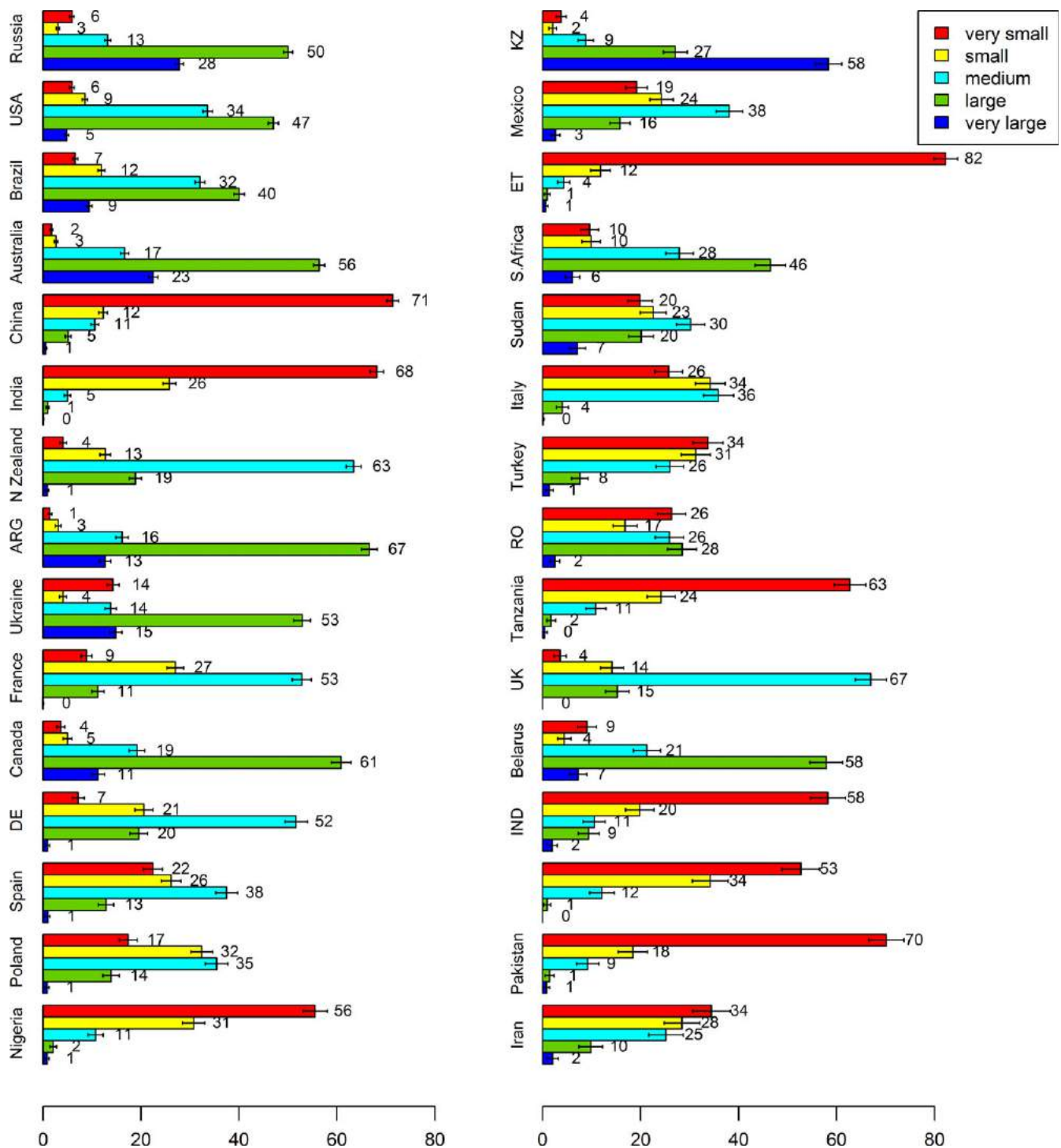


FIGURE 7 Percentage of area by field size for selected countries (confidence interval 95%). ARG: Argentina; De: Germany; IND, Indonesia; KZ: Kazakhstan; N Zealand: New Zealand; Ro: Romania; S Africa: South Africa; UK: United Kingdom [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/terms-and-conditions)]

Unfortunately, up to now, the spatial distribution of croplands and pastures derived from remote sensing does not yet meet user requirements for cropland monitoring (Pérez-Hoyos, Rembold, Kerdiles, & Gallego, 2017). If such layers appear in the near future, the potential users of the field size data set could repeat our approach to estimate area proportions of field sizes.

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DATA ACCESSIBILITY

All the data are of open access. Here is a link: <https://pure.iiasa.ac.at/id/eprint/15526/>.

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REFERENCES

- Chen, J., Ban, Y., & Li, S. (2014). China: Open access to Earth land-cover map. *Nature*, 514(7523), 434–434.
- Comber, A., Mooney, P., Purves, R. S., Rocchini, D., & Walz, A. (2016). Crowdsourcing: It matters who the crowd are. The impacts of between group variations in recording Land Cover. *PLoS ONE*, 11(7), e0158329. <https://doi.org/10.1371/journal.pone.0158329>.
- Cui, Z., Zhang, H., Chen, X., Zhang, C., Ma, W., Huang, C., ... Dou, Z. (2018). Pursuing sustainable productivity with millions of smallholder farmers. *Nature*, 555, 363. <https://doi.org/10.1038/nature25785>
- FAO, World Bank, & United Nations Statistical Commission (2012). *Action plan of the global strategy to improve agricultural and rural statistics*. Rome, Italy: FAO UN.
- Fonte, C. C., Antoniou, V., Bastin, L., Estima, J., Arsanjani, J. J., Laso-Bayas, J.-C., ... Vatsava, R. (2017). Assessing VGI data quality. In G. M. Foody, L. See, S. Fritz, C. C. Fonte, P. Mooney, A.-M. Olteanu-Raimond, & V. Antoniou (Eds.), *Mapping and the citizen sensor* (pp. 137–164). London, UK: Ubiquity Press.
- Foody, G., See, L., Fritz, S., Moorthy, I., Perger, C., Schill, D., ... Boyd, D. (2018). Increasing the accuracy of crowdsourced information on land cover via a voting procedure weighted by information inferred from the contributed data. *ISPRS International Journal of Geo-Information*, 7(3), 80. <https://doi.org/10.3390/ijgi7030080>
- Fritz, S., McCallum, I., Schill, C., Perger, C., See, L., Schepaschenko, D., ... Obersteiner, M. (2012). Geo-Wiki: An online platform for improving global land cover. *Environmental Modelling and Software*, 31, 110–123. <https://doi.org/10.1016/j.envsoft.2011.11.015>.
- Fritz, S., See, L., McCallum, I., You, L., Bun, A., Moltchanova, E., ... Obersteiner, M. (2015). Mapping global cropland and field size. *Global Change Biology*, 21(5), 1980–1992. <https://doi.org/10.1111/gcb.12838>.
- Graesser, J., & Ramankutty, N. (2017). Detection of cropland field parcels from Landsat imagery. *Remote Sensing of Environment*, 201, 165–180. <https://doi.org/10.1016/j.rse.2017.08.027>.
- Graeub, B. E., Chappell, M. J., Wittman, H., Ledermann, S., Kerr, R. B., & Gemmill-Herren, B. (2016). The state of family farms in the world. *World Development*, 87, 1–15. <https://doi.org/10.1016/j.worlddev.2015.05.012>.
- Havlik, P., Valin, H., Herrero, M., Obersteiner, M., Schmid, E., Rufino, M. C., ... Notenbaert, A. (2014). Climate change mitigation through livestock system transitions. *Proceedings of the National Academy of Sciences*, 111(10), 3709. <https://doi.org/10.1073/pnas.1308044111>.
- Herrero, M., Thornton, P. K., Power, B., Bogard, J. R., Remans, R., Fritz, S., ... Havlik, P. (2017). Farming and the geography of nutrient production for human use: A transdisciplinary analysis. *The Lancet Planetary Health*, 1(1), e33–e42. [https://doi.org/10.1016/S2542-5196\(17\)30007-4](https://doi.org/10.1016/S2542-5196(17)30007-4).
- Laso Bayas, J. C., See, L., Fritz, S., Sturn, T., Perger, C., Dürauer, M., ... McCallum, I. (2016). Crowdsourcing in-situ data on land cover and land use using gamification and mobile technology. *Remote Sensing*, 8(11), 905. <https://doi.org/10.3390/rs8110905>.
- Lesiv, M., See, L., Laso Bayas, J. C., Sturn, T., Schepaschenko, D., Karner, M., ... Fritz, S. (2018). Characterizing the spatial and temporal availability of very high resolution satellite imagery in google earth and microsoft bing maps as a source of reference data. *Land*, 7(4), 118. <https://doi.org/10.3390/land7040118>.
- Lowder, S. K., Skoet, J., & Raney, T. (2016). The number, size, and distribution of farms, smallholder farms, and family farms worldwide. *World Development*, 87, 16–29. <https://doi.org/10.1016/j.worlddev.2015.10.041>.
- Meyfroidt, P. (2017). Mapping farm size globally: Benchmarking the smallholders debate. *Environmental Research Letters*, 12(3), 031002. <https://doi.org/10.1088/1748-9326/aa5ef6>
- Pérez-Hoyos, A., Rembold, F., Kerdiles, H., & Gallego, J. (2017). Comparison of global land cover datasets for cropland monitoring. *Remote Sensing*, 9(11), 1118. <https://doi.org/10.3390/rs9111118>.
- Reed, J., Raddick, M. J., Lardner, A., & Carney, K. (2013). *An exploratory factor analysis of motivations for participating in Zooniverse, a collection of virtual citizen science projects*. (pp. 610–619) Piscataway, NJ: IEEE. <https://doi.org/10.1109/HICSS.2013.85>.
- Resnik, D. B., Elliott, K. C., & Miller, A. K. (2015). A framework for addressing ethical issues in citizen science. *Environmental Science and Policy*, 54, 475–481. <https://doi.org/10.1016/j.envsci.2015.05.008>.
- Ricciardi, V., Ramankutty, N., Mehrabi, Z., Jarvis, L., & Chookolingo, B. (2018). How much of the world's food do smallholders produce? *Global Food Security*, 17, 64–72. <https://doi.org/10.1016/j.gfs.2018.05.002>.
- Salk, C. F., Sturn, T., See, L., Fritz, S., & Perger, C. (2016). Assessing quality of volunteer crowdsourcing contributions: Lessons from the Cropland Capture game. *International Journal of Digital Earth*, 9(4), 410–426. <https://doi.org/10.1080/17538947.2015.1039609>.
- Samberg, L. H., Gerber, J. S., Ramankutty, N., Herrero, M., & West, P. C. (2016). Subnational distribution of average farm size and smallholder contributions to global food production. *Environmental Research Letters*, 11(12), 124010. <https://doi.org/10.1088/1748-9326/11/12/124010>.
- Sangeetha, U., Subbiah, M., & Srinivasan, M. R. (2013). Estimation of confidence intervals for multinomial proportions of sparse contingency tables using Bayesian methods. 3(4).
- See, L., Comber, A., Salk, C., Fritz, S., van der Velde, M., Perger, C., ... Obersteiner, M. (2013). Comparing the quality of crowdsourced data contributed by expert and non-experts. *PLoS ONE*, 8(7), e69958. <https://doi.org/10.1371/journal.pone.0069958>.
- See, L., Fritz, S., Perger, C., Schill, C., McCallum, I., Schepaschenko, D., ... Obersteiner, M. (2015). Harnessing the power of volunteers, the internet and Google Earth to collect and validate global spatial information using Geo-Wiki. *Technological Forecasting and Social Change*, 98, 324–335. <https://doi.org/10.1016/j.techfore.2015.03.002>
- Sullivan, B. L., Aycrigg, J. L., Barry, J. H., Bonney, R. E., Bruns, N., Cooper, C. B., ... Kelling, S. (2014). The eBird enterprise: An integrated approach to development and application of citizen science. *Biological Conservation*, 169, 31–40. <https://doi.org/10.1016/j.biocon.2013.11.003>.
- Waldner, F., Fritz, S., Di Gregorio, A., Plotnikov, D., Bartalev, S., Kussul, N., ... Defourny, P. (2016). A Unified cropland layer at 250 m for global agriculture monitoring. *Data*, 1(1), 3. <https://doi.org/10.3390/data1010003>.
- Wu, Y., Xi, X., Tang, X., Luo, D., Gu, B., Lam, S. K., ... Chen, D. (2018). Policy distortions, farm size, and the overuse of agricultural chemicals in China. *Proceedings of the National Academy of Sciences*, 115(27), 7010. <https://doi.org/10.1073/pnas.1806645115>.
- Yan, L., & Roy, D. P. (2016). Conterminous United States crop field size quantification from multi-temporal Landsat data. *Remote Sensing of Environment*, 172, 67–86. <https://doi.org/10.1016/j.rse.2015.10.034>.

You, L., Wood-Sichra, U., Fritz, S., Guo, Z., See, L., & Koo, J. (2014). *Spatial Production Allocation Model (SPAM) 2005 Beta Version*. [April 2014]. Washington, DC. Retrieved from <https://mapspam.info>

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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Migration and its Impact on Poverty in Assam: A Study

Diganta Kalita

Introduction:

Migration can be defined as the movement of people or individual from one place to another. Migration both internal and external is a universal phenomenon in human society. Different studies have been taken place across the world to identify the attributes of migration. Migration is a multidimensional phenomenon which includes a wide range of economic, social, political or environmental factors. Along with these 'push' and 'pull' factors drive migration. Push factors include drought, famine, lack of job, over population etc. and pull factors are a chance of a better job, better education, and a better standard of living. Migration is one of the basic components of population change. Migration has been taking place since time immemorial. It is a byproduct of the natural human instinct of people to move from one place to another due to in search of better life to get rid of intense poverty, to look for employment and to end up poor economic condition.

The issue of migration is one of the core issues in India in general and particular in Assam since independence of India. It was also the core issue behind the historical Assam movement in the latter decades of the twentieth century led by the leading students organization of the state. The tremendous influx of migrants from different part of our country as well as from other neighboring countries left a grappling with the massive problem of population explosion and has put enormous pressure on the socio economic development of the state. Along with population explosion migration leads lots of problems such as density of demographic composition, outbreak of insurgency, cultural –political insecurity, linguistic insecurity etc. but what is does the most harmful is its impact over poverty.

Objectives of the paper: The objectives of this paper are

1. To examine the migration problem in Assam.
2. To examine the impact of migration on poverty in Assam
3. To suggest some necessary action to solve this problem

Methodology:

This paper is mainly based on secondary data. The research has used available literature on migration, poverty and other relevant concepts. It has relied upon books, articles from journals, news paper reports, government and non government publicities and other agencies.

Migration, Population growth and Poverty in Assam:

Migration, population growth and poverty are three interrelated concepts. Migration is one of the core drivers of population growth. Population growth is one of the major causes of poverty. Thus, poverty is an indirect but core result of migration.

2019-20

Origin of the Tai-Phake community of the Brahmaputra valley and their acculturation with the greater Assamese society

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ABSTRACT

The present paper tries to throw some light on the origin of Tai-Phake community living in selected pockets of Assam and deal with the change in life and culture of Tai-Phake community of Namphake village. The Tai-Phake people were originally from the Hu-kwang valley of Myanmar. They migrated in and around 1775 from Hu-Kwang valley to Assam in search of better life. To sustain their lives the people settled around the river side because of availability of water for various works. Water also helps them for cultivation of crops i.e. agriculture, which was their main occupation. The river plays an important role in the Tai-Phake community of Namphake village. The process of modernization is observed with the help of comparison in lifestyle, food, traditional practices among the older generation and new generation. Many of the festivals have vanished because of the irregular practices. There is influence in the language of the Tai-Phake community because of acculturation with different culture like the Assamese, Bengali etc. Monastery was considered to be the place where people worship, cultural gathering and educational hub but in the present period it is used only for worshipping and considered as a tourist hub. The people of Namphake village has tried to hold on to their original customs and beliefs and has preserved it by arranging evening classes of tai languages for the people, wearing traditional dresses during festival and marriage festivals and marriages. Conclusions are drawn based on the analysis of the collected information during the survey time.

Key Words: Tai-Phake, Cultural Acculturation, Namphake village

Participation and Decentralization of Development: A Case Study of Assam

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Abstract: Existing gap between urban and rural process of growth and change necessitates development decentralization as like the political decentralization in India. Factual development is related to all the people of rural and urban areas. Economists accepted the same and argued in favour of capability enhancement of rural people for balanced economic development.

MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) is one of the flagship programmes of government of India implemented in the year 2005. By the very nature of the act, it has been active in each and every rural corners of the country. Rural unskilled people are entitled to minimum 100 days of work in a year. With different scheduled works and convergent approaches of MGNREGA, the process of rural development is now disseminated in the hands of participants. Taking 100 sample MGNREGA workers and same number of non MGNREGA workers (with same economic status) of Assam state (during June to September, 2018) we observed the situation- whether MGNREGA has promoted peoples' participation in development and actually decentralized the process of development. With these prime objectives of research we collected empirical information regarding MGNREGA workers (Experimental Group/EG) from 10 numbers of different MGNREGA work sites (located in different panchyats) of Assam. Similarly, information for non MGNREGA workers (Control Group/CG) is collected from the respective panchyats from where the MGNREGA work sights are chosen for data collection. Both MGNREGA and non MGNREGA workers are belonging to similar economic standard especially with respect basic economic necessities of living.

Taking four matching covariates (Age, educational qualification, marital status and family type) and variables (peoples' participation and decentralization of development) of study we applied PSM technique of research. Out of total 200 sample units of research 146 units are exactly matched and accordingly impacts on peoples' participation and decentralization of development through MGNREGA are analyzed in the paper. Matching propensity score lies between 0.38 to 0.63 ranges. 'Peoples' participation in development and decentralization of development has increased in the current period' is the single hypothesis created to verify during the course of our study. Using SPSS we analyzed the problem and found positive peoples' participation and development decentralization under MGNREGA in the state of Assam.

Keywords: Decentralization, Development, Impact, Peoples' Participation, MGNREGA etc.

1. INTRODUCTION

Looking into the long existing gap between urban and rural process of growth and change, it is now considered that development decentralization is necessary in India. Right development is accepted as related to all including the people of rural and urban areas. Prof. A.K. Sen (1980) accepted the same and argued in favour of capability enhancement of rural

2020-21



An infrared thermography-based study on the variation in diurnal and seasonal land surface temperature at Dibrugarh city, India

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Abstract

The understanding of surface urban heat island pattern above Dibrugarh City has been studied through in situ observation using non-contact infrared thermometer for a period of 4 months by covering 16 selected locations. The chosen locations envelop both urban and suburban sites. The study draws attention to urban hot spots toward the central part of the city all through the different months in addition to the seasons, owing to heat retention supported by the built environment with fewer vegetation cover. Seasonally winter uncovered utmost variability of LST indicated by higher CV value. The core locations/sites witnessed a least amount of variability and continuity of higher LST throughout the learning months. At diurnal pattern, LST designated a sharp decrease from morning to afternoon period through winter months, while contrastingly summer months witnessed a sharp fall of LST from afternoon to night period. Among all the surfaces, asphalt pavement noticed maximum surface temperature with maximum variability in both diurnal and temporal scales. Maximum assimilation with fewer albedo of asphalt surface along with drier soil and grass comes across maximum LST in the internal part of the city. In addition, traffic, pollution and anthropogenic heat emission supported warmer surface temperature of asphalt, grass and bare soil, which on the whole put into the growth of higher surface heat. The stronger affirmative correlation coefficient amid the temperature of different surfaces with air temperature and comparatively weaker unconstructive correlation with relative humidity witnessed the dominant role of air temperature on overall surface urban heat island process.

Keywords LST · Diurnal scale · Variability · Surface temperature · Intensity

Introduction

Land surface temperature (LST) and its diurnal variation are crucial for the physical, chemical and biological processes of Earth. Climate-related studies were carried out to assess the environmental conditions and management practices on Earth surfaces, and their surrounding atmosphere requires LST information on a useful scale (Becker and Li 1993). Urbanization is a driver which brings a noticeable change in the natural surface of the Earth, and the natural surface is converted from bare soil or green area to the newly built surface (e.g., asphalt, stone, metal, concrete, etc.), thereby causing a change in the land cover. An urban heat island

is a happening in which urban air temperature is comparatively higher than the adjoining rustic air temperature (Choi et al. 2014). Urban heat island intensity is mainly restricted by synthetic constructions in the urban environment as a consequence of extensive urbanization and industrialization (Oke 1973; Voogt and Oke 2003). Increased thermal capacity and relatively lower potentiality of evapotranspiration together with artificial temperature intensify the procedure of heat island intensity (Roth et al. 1989). Moreover, urban heat island consequences can as well be connected to climate strictures (Sundborg 1950; Chandler 1965; Unger et al. 2001). Further, skyscraping buildings and narrow roads reduce horizontal airflow (Liu and Zhang 2011). The unfavorable consequence of UHI is intense urban climate and thermal uneasiness (Almusaed 2011), rising utilization of power (Akbari and Konopacki 1998) and increasing per head water consumption, particularly during summer season (Guhathakurta and Gober 2007). It also leads to cool

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CONTROL OF DAMPING-OFF DISEASE OF DIFFERENT VARIETIES OF BRINJAL (*SOLANUM MELONGENA* L.) BY USING BOTANICAL EXTRACTS.

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ABSTRACT

Damping off is a serious disease of brinjal which leads to the decay of germinating seeds, seedling and limit their production in nurseries and fields. The present investigation was carried out the effect of aqueous extracts of two botanical extracts viz. *Allium sativum* and *Allamanda cathartica* against damping-off disease on the three different varieties of brinjal i.e Pusa Purple, Pusa Purple Long and Pusa Purple Round in the shade-net nursery. Seed treatment with *Allium sativum* and *Allamanda cathartica* were evaluated against damping-off, seed germination and growth characters of brinjal seedlings. Both the treatments significantly reduced per cent damping-off of these three varieties of brinjal over control. The highest seed germination was recorded in Pusa Purple Round (88.33%) followed by Pusa Purple (86.33%) and Pusa Purple Long (80.33%) after seed treatment with *Allium sativum*; while the *Allamanda cathartica* extract showed 86.66, 84.33 and 73 per cent on Pusa Purple Round, Pusa Purple and Pusa Purple Long variety, respectively.

KEYWORDS: Brinjal, aqueous extracts, damping-off, seed treatment.

INTRODUCTION

Brinjal (*Solanum melongena* L.) is an important vegetable crop grown in Assam. It is grown round the year both as winter and summer crops. The soil-borne pathogens are the most dangerous diseases infecting worldwide crop plants since they attack different plant species. Some species of fungi such as *Fusarium oxysporum*, *Rhizoctonia solani* and *Phomopsis vexans* are known for causing damping-off disease for many economically important crops. Among the various diseases that attack brinjal plant damping-off is the most destructive one. Damping-off has been found to affect 80-100% of seedlings in nurseries of various crops (Agrios, 2005). Damping-off mainly affects plants prior to seed germination and throughout the seedling stage (Agrios, 1997). Crop losses due to damping-off disease vary from place to place. There are several methods applicable for controlling damping-off disease. Use of botanicals instead of chemical fungicides is one of the recent approaches for plant disease control, as fungicides may cause health hazard and may directly increase environmental pollution. However some research works has been found in controlling wide range of seed borne pathogens by different botanicals (Hawladar, 2003; Hossain *et al.*, 2005; Choudhury, 2005 and Islam *et al.*, 2006) and very few research have been performed to evaluate the efficacy of botanicals against soil borne

pathogens in field level (Monaim *et al.*, 2011). In this context, the present study was designed to evaluate the efficacy of two plants extracts as a seed treating agent against the pathogens to control damping-off disease of brinjal.

MATERIALS AND METHODS

Three brinjal varieties viz. Pusa Purple, Pusa Purple Long and Pusa Purple Round selected for the study were collected from farmer's storages of Goalpara district, Assam. Two plants species namely *Allium sativum* and *Allamanda cathartica* were collected and washed first in tap water and then in distilled water. 100 grams of fresh sample was chopped and then crushed in a surface sterilized pestle and mortar by adding 100 ml sterile water (1:1w/v). The extracts were filtered through two layers of muslin cloth and then finally filtrate through what-man filter paper-No.1. For getting 15% ratio 85 ml distilled water was added with 15 ml plant extract. Seeds were treated by dipping separately in extracts for 30 minutes. Then the excess extract was drained off and treated seeds were kept in blotting paper to remove excess moisture from seed surface and dry in the open air. Then the seeds were sown in the pot at the rate of 100 seeds/pot. Observations were recorded on seed germination, percent damping-off, seedling height, shoot length, root length, fresh shoot weight, fresh root weight,

EVALUATION OF FUNGICIDES, BIOAGENT AND PLANT EXTRACTS AGAINST *FUSARIUM OXYSPORUM* F.SP.MELONGENAE CAUSING BRINJAL WILT ON DIFFERENT VARIETIES UNDER GREEN HOUSE CONDITION

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ABSTRACT

Brinjal (*Solanum melongena* L.) is an important vegetable crop in India. This crop is affected by many diseases. Among them wilt disease is one of the most common diseases of brinjal caused by *Fusarium oxysporum*; a soil borne fungus. The present investigation therefore was carried out to evaluate the effects of fungicides, bioagent and plant extracts, against this pathogen. Two fungicides (Bavistin and Mancozeb) one bio-agent (*Trichoderma viride*) and two plant extracts (*Allium sativum* and *Allamanda cathartica*) were tested against the disease in *in vivo* condition. Among the treatments applied in the presents experiments, Bavistin, Mancozeb and *Trichoderma viride* showed 100 percent reduction of wilt disease in all the three varieties; while *Allium sativum* and *Allamanda cathartica* extracts showed ($V_1 = 81.2$, $V_2 = 69.8$, $V_3 = 76.8$)% and ($V_1 = 62.4$, $V_2 = 39.7$, $V_3 = 53.7$) percent reduction respectively over control.

Keywords: Wilt, Brinjal, Fungicides, Bioagent, Plant extracts.

1. INTRODUCTION

Brinjal (*Solanum melongena* L.) belongs to the family solanaceae is one of the most popular vegetables in India. It is commonly called egg plant. In India brinjal is consumed as cooked vegetable in various ways. It has nutritive value in human diet, because it contains about 1.4 g proteins, 4.0 g carbohydrate, 0.3 g fat, 18 mg calcium, 2.0 mg potassium and 0.9 mg iron per 100 g of edible portion. It also provides vitamins A, B and C [1]. Besides having nutritive value, it also possesses medicinal properties. The white type brinjal is said to be good for diabetic patients [2]. The seeds of brinjal are used as a stimulant [3]. Among the different diseases that attack eggplant wilt is one of them caused by *Fusarium oxysporum* has become a major disease causing significant reduction in yield [4]. The wilt of eggplant is characterized by yellowing of foliage drooping of apical shoot to ultimate death of whole plant. This soil inhabiting fungus colonizes the senescing tissues of the diseased plant and may survive in the soil for many years [5]. Indiscriminate use of pesticide has led to serious environmental threat. Hence, the present study was undertaken to evaluate the efficacy of fungicides, bio-agent; and plant extracts against the pathogen to manage the disease.

2. MATERIAL AND METHODS

2.1. Preparation of pot

Earthen pots (30 cm in diameter and 45 cm in height) were washed with sterilized water followed by 70 percent alcohol. Garden soils were collected broken into powdery form and removed root bits and other foreign materials. The soil was mixed with decomposed cow dung and sand in a ratio of 2:1:1 and sieved through 4 mm sieve and sterilized in an autoclaves at 15 lb/inch² pressure for one hour for three successive days.

2.2. Inoculation of *Fusarium oxysporum*

Brinjal Seeds (cv. Pusa Kranti, Pusa Purple Oval and Pusa Purple Long) were collected from the central seed godown, Department of Agriculture, Government of Assam, Guwahati. Seeds were surface sterilized by dipping them in 10% sodium hypo chloride separately for 1 min. followed by 70% alcohol for 30 second and finally they were washed several times with sterile distilled water. They were allowed to grow on sterilized sand in earthen flat pots. One month old healthy seedlings were selected to receive treatment with *F. oxysporum* f. sp. *melongenae*. All the seedlings except the control were treated with *F. oxysporum* f.sp *melongenae*. Two hundred ml of sterile 7 days old PDB culture @



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To,

Dr. Trailokya Deka,

Assistant Professor

Deptt. of Economics, B. P. Chaliha College,

Nagarbera, Kamrup (Assam)

Dear author/s

I have pleasure to inform you that your following Original Article has been accepted for publication in Indian Journal of Public Health Research and Development

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Assistant Professor, Deptt. of Economics, B. P. Chaliha College, Nagarbera, Kamrup (Assam)

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It will be published in Volume 11, No 1, January 2020 issue. It is further mentioned for your information that our journal is a double-blind peer reviewed indexed international journal. It is covered by Index Copernicus (Poland), Indian Citation index, Google Scholar, CINAHL, EBSCOhost (USA), EMBASE (Scopus) and many other international databases. The journal is now part of CSIR, DST and UGC consortia. The Journal is index with Scopus and fulfills MCI Criteria as per MCI circular dated 03/09/2015.

With regards

Yours sincerely

Prof R K Sharma

Editor

Compendium of plants used for preparation of traditional alcoholic beverages by four major ethnic communities of Assam, northeast India

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Abstract. Borah D, Gogoi T, Sarma J, Borah PJ, Gohain B, Mili C, Upadhyaya A, Basumatary J, Neog K, Wangpan T, Tangjang S. 2021. Compendium of plants used for preparation of traditional alcoholic beverages by different major ethnic communities of Assam, Northeast India. *Biodiversitas* 22: 2019-2031. This paper deals with the ethnobotanical research on the preparation of traditional alcoholic beverages by *Ahom*, *Bodo*, *Karbi* and *Mishing* ethnic communities of Assam, India. Along with the information on preparation, the plant species associated with the preparation of alcoholic beverages are also recorded. Field investigations were conducted to cover 32 villages of six districts of Assam, India. The data was generated from 202 respondents using participatory rural appraisal tools including semi-structured questionnaires and personal interviews. The plant species were collected, identified and submitted in the Herbarium of Rajiv Gandhi University, Arunachal Pradesh, India. The study recorded 129 plants falling under 107 genera and 54 families which are exclusively used for the preparation of alcoholic beverages by the studied communities. The study confirmed that the association of traditional alcoholic beverages with their rich indigenous knowledge. The finding also revealed varied forms of protocol followed by these tribes to prepare traditional liquors and the starter cakes for brewing of alcohol were prepared locally. However, the *Mishing* tribe was known to prepare unique rice beer known as *Po:ro apong*, as the preparation technique and extraction process of this liquor was slightly different. Distillation of alcohol was also observed in all the communities except the *Ahom*. The rich traditional knowledge of brewing alcohol and the plant species used in the process were worth documenting considering the ongoing alteration of traditional society with the modernization.

Keywords: Alcoholic beverage, ethnobotany, Northeast India, traditional knowledge, tribal society

INTRODUCTION

Fermentation and fermented beverages have always been an integral part to human cultures and traditions since ancient times (Alan 1997). The beer is supposed to have originated in Sumeria before 7000 B.C. (Demain et al. 1998). Traditionally prepared fermented beverages have always been associated with the values and survival of the tribes throughout the world since the dawn of civilization (Alan 1997). It is assumed that the preparation of traditional wine, beer and their varieties in consumption may have probably emerged due to the varied climatic conditions and was heavily dependent on the availability and utilization of locally available natural resources (Roy et al. 2004). The fermented rice beverages of the tribal people are prepared using various plants which are known to possess numerous medicinal properties. It has been reported that the phytochemical components present in these plant species proved to have remarkable therapeutic potential when used alone or in combinations (Prakash et al. 2004; Bhuyan and Baishya 2013). These forms of traditional alcoholic beverages have a considerable impact

on health care and provide health benefits of preventing and treating gastrointestinal diseases along with certain physiological disorders (Nath et al. 2019) such as insomnia, headache, diarrhea, body ache and inflammation of body parts, expelling worms along with the treatment of cholera and urinary problems (Samati et al. 2007; Deka and Sarma 2010; Nath et al. 2019). Several reports from different parts of Northeast India have also been claimed the presence of nutritional as well as antioxidant properties in rice beer samples which is due to the presence of compounds such as phenolic acids, polyphenols, and flavonoids (Nath et al. 2019).

Assam is home to diverse ethnic communities and tribal groups, mostly of Mongoloid origin, such as *Ahom*, *Rabha*, *Deori*, *Tiwa*, *Bodo*, *Karbi*, *Mishing*, *Sonowal Kachari*, etc. (Sharma 2017). These communities have been preparing and consuming traditional rice beer for about 2500 years and possess a good deal of knowledge about fermented food products (Tamang 2010). As such, a variety of cereal-based alcoholic beverages are prepared and consumed by these communities during many occasions such as ritual ceremonies, marriages and merry-making, festivals and

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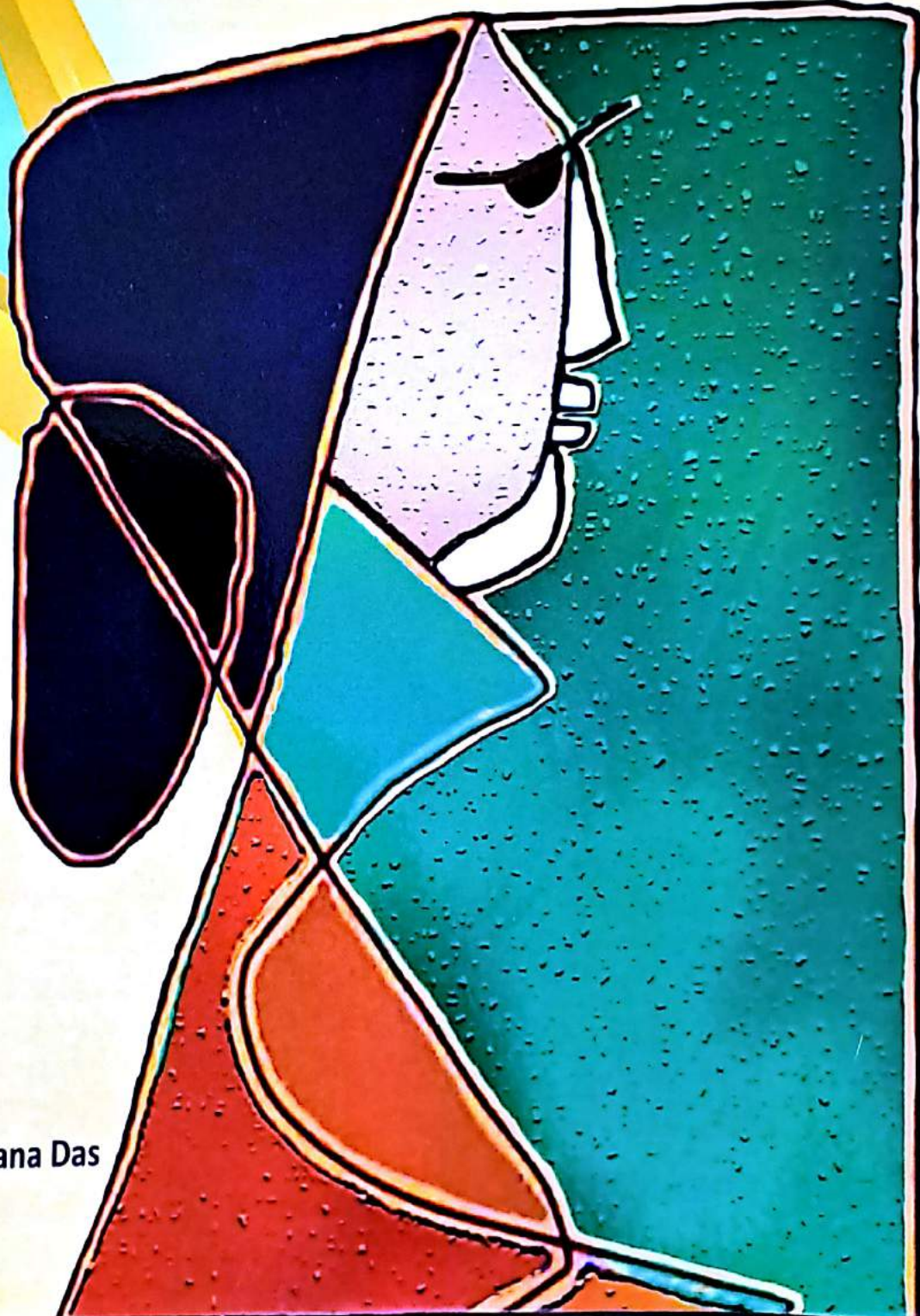


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শিল্পী শৰ্মা, বিদ্যুৎ দত্ত
সহকাৰী অধ্যাপক, অসমীয়া বিভাগ,
বিমলা প্ৰসাদ চলিহা মহাবিদ্যালয়,
নগৰবেৰা।

সংক্ষিপ্তসাৰ :

অতীজৰেপৰা পুৰুষশাসিত সমাজত নাৰীৰ প্ৰতি নানা অবিচাৰ, নিপীড়ন চলি আহিছে। সময়ে সময়ে নাৰীৰ অধিকাৰ, নিৰাপত্তা আদিক লৈ শক্তিশালী আন্দোলন গঢ় লৈ উঠিছে। শেহতীয়াকৈ সামাজিক মাধ্যম (Social media)ত মি টু আন্দোলনেও এইক্ষেত্ৰত বিশেষ চৰ্চা লাভ কৰিছে। মি টু আন্দোলনৰ আৰম্ভ হৈছিল আমেৰিকাত বাস কৰা আফ্ৰিকানমূলীয় মানৱাধিকাৰ সমাজকৰ্মী তাৰানা বৰ্ক (Tarana Burke)ৰ হাতত। কৰ্মস্থান বা আন স্থানত যৌন উৎপীড়নৰ বলি হোৱা মহিলা, যুৱতী সকলোকে তেওঁ টুইটাৰত হেষ্টিংগ দি নিজৰ কথা প্ৰকাশ কৰিবলৈ আহ্বান জনায়। তাৰানা বৰ্ক ২০০৬ চনত 'মি টু' (Me Too) শব্দ প্ৰয়োগ কৰি এই আন্দোলনৰ আৰম্ভণি কৰিছিল যদিও ২০১৭ চনতহে হলিউডৰ চলচ্চিত্ৰকেন্দ্ৰিক সমাখনৰ মাজেৰে এই আন্দোলনে এক ব্যাপক ৰূপ লাভ কৰে। ক্ৰমশঃ এই আন্দোলন বিশ্বৰ বিভিন্ন প্ৰান্তলৈ বিয়পি পৰে। ভাৰততো ইয়াৰ আৰম্ভণি হয় বলিউডৰ চলচ্চিত্ৰকেন্দ্ৰিক ক্ষেত্ৰখনৰ মাজেৰে। কৰ্মস্থলীত যৌন শোষণৰ বলি হোৱা অভিনেত্ৰীসকলে দমনমূলক প্ৰলোভন, ভাবুকি আদিক নেওচি সামাজিক মাধ্যমত তেনে শোষণৰ বিৰুদ্ধে অভিযন্তা ব্যক্ত কৰে। অসমতো এই মি টু আন্দোলনে বিশেষ আলোড়ন সৃষ্টি কৰিবলৈ সক্ষম হয়। শেহতীয়াকৈ বাতৰি কাকত, সামাজিক মাধ্যম আদিত এই বিষয়ে চৰ্চা আৰম্ভ হয়।

০.১ বিষয়ৰ পৰিচয় :

২০১৭ চনতে আমেৰিকা যুক্তৰাষ্ট্ৰত নাৰী সজাগতাৰ আন্দোলন হিচাপে শক্তিশালী হৈ উঠা মি-টু আন্দোলন পৰৱৰ্তী সময়ত অন্যান্য দেশৰ লগতে ভাৰতবৰ্ষলৈও প্ৰসাৰিত হৈছিল। বিশেষকৈ কৰ্মক্ষেত্ৰত যৌন উৎপীড়নৰ বলি হোৱা বহু মহিলাই ছ'চিয়েল মিডিয়াৰ যোগেদি নিজৰ নিজৰ ক্ষেত্ৰত হোৱা এনে কাহিনী বৰ্ণনা কৰিছিল। এই মি-টু আন্দোলনে সৃষ্টি কৰা সজাগতা ভাৰত আৰু অসমৰ পৰিপ্ৰেক্ষিতত কিমানদূৰ ফলপ্ৰসু হ'ল তাৰ বিশ্লেষণ মি-টু আন্দোলন সৃষ্টি হোৱাৰ সংক্ষিপ্ত ইতিহাস নিৰ্ধাৰণ আদি বিষয়বোৰক এই ক্ষুদ্ৰ গৱেষণা পত্ৰখনত তুলি ধৰাৰ প্ৰয়াস কৰা হৈছে।

০.২ বিষয়বস্তুৰ গুৰুত্ব :

বিশ্ব ইতিহাসত লিপিবদ্ধ নাৰীবাদী আন্দোলনসমূহৰ মাজত মি-টু আন্দোলনেও এখন নিৰ্দিষ্ট আসন লাভ কৰিছে। ইংৰাজী আৰু হিন্দী ভাষাত মি-টু আন্দোলনৰ ইতিহাস সম্পৰ্কীয় গ্ৰন্থ বা মি-টু আন্দোলনক

কেন্দ্ৰ কৰি গল্প, কবিতা আদি অনেক ৰচিত হৈছে। কিন্তু অসমীয়া ভাষাত এই সম্পৰ্কে বিশেষ চৰ্চা হোৱা নাই। বাতৰি কাকত আদিত লিখিত অতি মুষ্টিমেয়সংখ্যক প্ৰবন্ধ, দূৰদৰ্শনৰ দুই-এটা বিশ্লেষণমূলক সাক্ষাৎকাৰৰ বাহিৰে আন ক'তো চৰ্চা হোৱা নাই। এই ক্ষুদ্ৰ গৱেষণা পত্ৰৰ জৰিয়তে সীমিত পৰিসৰৰ ভিতৰত মি-টু সম্পৰ্কে বিশ্লেষণ কৰাৰ প্ৰয়াস কৰা হৈছে।

০.৩ অধ্যয়নৰ পৰিসৰ :

মি-টু সম্পৰ্কত ইংৰাজী ভাষাৰ বহু কিতাপ উপলব্ধ যদিও ব্যৱহৃত্যৰ বাবে সীমিতসংখ্যক ইংৰাজী কিতাপক ইতিহাস নিৰ্ধাৰণৰ ক্ষেত্ৰত সমল হিচাপে লোৱা হৈছে। হিন্দী ভাষাৰো সীমিত সংখ্যক কিতাপৰ সহায় লোৱা হৈছে। বাতৰি কাকত, বাতৰি কাকতৰ কেইবাটাও ৱেবচাইটত প্ৰকাশিত বাতৰি আৰু প্ৰবন্ধ, ইণ্টাৰনেট, দূৰদৰ্শন চেনেলৰ সাক্ষাৎকাৰ, ইউটিউবত উপলব্ধ সাক্ষাৎকাৰ আদিক উপযুক্ত বিচাৰ-বিশ্লেষণেৰে প্ৰস্তুত গৱেষণা পত্ৰখন প্ৰস্তুত কৰাৰ প্ৰয়াস কৰা হৈছে।

০.৪ অধ্যয়নৰ উদ্দেশ্য :

- (১) মি-টু আন্দোলনৰ সংক্ষিপ্ত ইতিহাস তুলি ধৰা।
- (২) ভাৰত-বাংলাদেশলৈ মি-টু আন্দোলনৰ আগমনৰ ইতিহাস দাঙি ধৰা।
- (৩) অসমলৈ মি-টু আন্দোলনৰ আগমনৰ ইতিহাস নিৰ্ধাৰণ কৰা।
- (৪) মি-টু আন্দোলনৰ সফলতা-বিফলতা নিৰ্ধাৰণ কৰা।
- (৫) মি-টু আন্দোলন সম্পৰ্কে বিভিন্নজনৰ মতামত আৰু সেই সময়ত সৃষ্টি হোৱা সামাজিক সচেতনতা সম্পৰ্কে অধ্যয়ন।

০.৫ উৎস আৰু পদ্ধতিঃ

প্ৰদত্ত গৱেষণা কৰ্মটি প্ৰস্তুত কৰাৰ ক্ষেত্ৰত বিশ্লেষণাত্মক পদ্ধতিৰ সহায় লোৱা হ'ব। মুখ্য উৎস হিচাপে বিভিন্ন গ্ৰন্থপঞ্জী আৰু বাতৰি কাকত আদিত প্ৰকাশিত প্ৰবন্ধসমূহ লোৱা হ'ব। গৌণ উৎস হিচাপে ইণ্টাৰনেটৰপৰা প্ৰাপ্ত তথ্য আৰু দূৰদৰ্শন আৰু ইউটিউবত প্ৰাপ্ত সাক্ষাৎগ্ৰহণক সমল হিচাপে লোৱা হৈছে।

০.৬ পূৰ্বকৃত কামৰ খতিয়ান :

মি-টু আন্দোলন সম্পৰ্কত ইংৰাজী, হিন্দী আৰু অন্যান্য বহুতো ভাষাত ইতিমধ্যে বিভিন্ন গ্ৰন্থ আৰু প্ৰবন্ধ আদি ৰচিত হৈছে। ইংৰাজী ভাষাত ৰচিত এই সম্পৰ্কীয় গ্ৰন্থৰ ভিতৰত—Marvin Fant ৰ *THE ME TOO MOVEMENT: THE FALL OF MEN RISE OF WOMEN*, Lori Perkins ৰ *ME TOO: Essays about How and Why This Happened, What it Means, and How to make Sure it Never Happens Again* আদি গ্ৰন্থ গুৰুত্বপূৰ্ণ। হিন্দী ভাষাত ৰচিত গ্ৰন্থসমূহৰ ভিতৰত আকাশ মাথুৰৰ *মি-টু* গ্ৰন্থখন বিশেষভাৱে উল্লেখযোগ্য। অসমীয়া ভাষাত এই সম্পৰ্কীয় গ্ৰন্থ বৰ্তমানলৈকে চকুত পৰা নাই। এই সম্পৰ্কত অসমীয়া ভাষাত বাতৰি-কাকততহে দুই-এটা প্ৰবন্ধ প্ৰকাশিত হৈছে।

০.৭ প্রাক্কল্পনাঃ

(১) অসমীয়া ভাষাত মি টু আন্দোলনৰ সামগ্ৰিক ইতিহাস দাঙি ধৰাৰ প্ৰয়াসৰ লগতে পাশ্চাত্যত ইয়াৰ বিকাশ সম্পৰ্কে অধ্যয়ন কৰা।

(২) ভাৰত আৰু বাংলাদেশত মি-টু আন্দোলনৰ আৰম্ভণি আৰু ই সৃষ্টি কৰা পৰিৱেশ সম্পৰ্কে অধ্যয়ন কৰা।

(৩) অসমত মি টু আন্দোলনৰ আৰম্ভণি আৰু বিকাশৰ লগতে ই কঢ়িয়াই অনা বিভিন্ন দিশ, অসমত মি-টু আন্দোলন সম্পৰ্কত বিভিন্নজনৰ মন্তব্য আদিৰ বিচাৰ-বিশ্লেষণ কৰা।

(৪) সাহিত্যত মি-টু আন্দোলনে পেলোৱা প্ৰভাৱ সম্পৰ্কে অধ্যয়ন কৰা।

(৫) মি-টু আন্দোলনৰ সফলতা-বিফলতা আৰু ই আনি দিয়া পৰিৱৰ্তন সম্পৰ্কত অধ্যয়ন কৰা।

১.০ মি-টু আন্দোলনৰ ইতিহাস আৰু পাশ্চাত্যত ইয়াৰ প্ৰসাৰতা :

বিশ্ব সংসাৰ চলিবলৈ নাৰী আৰু পুৰুষ—এই দুই সত্ত্বাৰ প্ৰয়োজন অনস্বীকাৰ্য। শাৰীৰিক শক্তি পুৰুষ নাৰীতকৈ অধিক শক্তিশালী—এই কথা কোনেও অস্বীকাৰ কৰিব নোৱাৰে। কিন্তু মানসিকভাৱে নাৰীয়ে সদায় প্ৰবল শক্তিৰ পৰিচয় দি আহিছে। প্ৰাচীন মহাকাব্যসমূহলৈ দৃষ্টি দিলেও দেখা যায় নাৰী চৰিত্ৰসমূহে ইয়াত শক্তিশালী ভূমিকাই গ্ৰহণ কৰিছে। সমাজ বা পৰিয়াল গঠনত নাৰীৰ ভূমিকাই আটাইতকৈ বেছি। তৎসত্ত্বেও কেতিয়াও সমাজত নাৰীক উচ্চস্থান দিয়া নহ'ল। নাৰী হৈ থাকিল পুৰুষৰ দাস। সাম্প্ৰতিক বিজ্ঞান-প্ৰযুক্তিৰ সমাজখনত পুৰুষৰ সমানে নাৰী আগুৱাই গৈছে, নিজৰ অধিকাৰ সাব্যস্ত কৰিবলৈ সক্ষম হৈছে। তথাপি লোকচক্ষুৰ আঁৰত গোপনে বা অপ্ৰকাশ্যভাৱেই হওক নাৰী আজিও কোনোবাখিনিত শোষিত-পীড়িত হৈ আছে। নাৰী-পুৰুষৰ সামাজিক মৰ্যাদা আৰু স্থানক লৈ বিভিন্ন সময়ত বিভিন্ন মহলত বাক-বিতণ্ডা বা চিন্তা-চৰ্চা হৈ আহিছে। নাৰী-পুৰুষৰ সমতা স্থাপনক লৈ বিভিন্ন সময়ত হোৱা প্ৰতিবাদ-আন্দোলনৰ কথা বিশ্ব-ইতিহাসত লিপিবদ্ধ হৈ আছে। নাৰী-পুৰুষৰ সমমৰ্যাদাৰ বিষয়টো প্ৰথমে আলোচিত হয় ইংলেণ্ডৰ দাৰ্শনিক জন লকৰ 'Second Treatise of Government, 1689' নামৰ গ্ৰন্থত। ১৮৪৮ চনত এলিজাবেথ কেডিষ্টেনটোন, মেৰী উৱলষ্টোন ক্ৰাফ্ট আৰু লোকেছীয়া মটুই পাশ্চাত্যত নাৰী-পুৰুষৰ ৰাজনৈতিক-সামাজিক সমমৰ্যাদাৰ বিষয়টো উপস্থাপন কৰে 'Seneca Falls Covention' ৰ যোগেদি। বিশ্বৰ ইতিহাসত ই আছিল অতি উল্লেখযোগ্য ঘটনা। পাশ্চাত্যত ইয়াৰ পাছৰপৰাই নাৰীৰ মৰ্যাদা আৰু অধিকাৰ লাহে লাহে প্ৰতিষ্ঠিত হ'বলৈ ধৰে।

সামাজিক, ৰাজনৈতিক, শৈক্ষিক, অৰ্থনৈতিক আদি সকলো দিশতে পুৰুষৰ সমানে নাৰীৰ অধিকাৰ প্ৰতিষ্ঠা হ'ল যদিও নাৰীৰ শোষণ-নিৰ্যাতনৰ মাত্ৰা আজিও কম নাহি। নিজৰ ঘৰ, কৰ্মক্ষেত্ৰ আদি সকলো ঠাইতে অধিকাংশ নাৰী যৌন নিৰ্যাতনৰ বলি হ'ব লগা হয়। এনে ভুক্তভোগী নাৰীৰ প্ৰতিৰক্ষামূলক প্ৰতিবাদী কণ্ঠ হ'ল 'মি-টু' (#Me Too)। সমগ্ৰ বিশ্বত মি-টু আন্দোলন সম্পৰ্কে ২০১৭ চনৰপৰা বিশেষভাৱে চৰ্চিত হৈ আহিছে, আৰু ইয়াৰ প্ৰভাৱ চলচ্চিত্ৰ, সংগীত, ৰাজনীতি আদি প্ৰায় সকলো দিশলৈ বিয়পি পৰিছে। ভুক্তভোগী মহিলাসকলে ফেচবুক, টুইটাৰ আদিৰ যোগেদি নিজৰ ক্ষেত্ৰত হোৱা যৌন নিৰ্যাতনৰ কথা মুকলিকৈ প্ৰকাশ কৰি কৈছে—'ময়ো' (#Me Too)। এই মি-টু আন্দোলনৰ আৰম্ভণি ঘটে আমেৰিকা নিবাসী তাৰানা বাৰ্কৰ

হাতত। ছ'চিয়েল মিডিয়াৰ যোগেদি আৰম্ভ হোৱা এই মি-টু আন্দোলন পৰৱৰ্তী সময়ত বিশ্বৰ প্ৰায়বোৰ দেশকে কম-বেছি পৰিমাণে প্ৰভাৱিত কৰে। তাৰানা বাকৰে আৰম্ভ কৰা এই মি-টু আন্দোলনৰ হলিউডৰ বিখ্যাত অভিনেত্ৰী এলিছা মিলানোৰ হাতত প্ৰসাৰতা লাভ কৰে।

১.১ তাৰানা বাকৰ আৰু মি-টু আন্দোলন :

মি-টু আন্দোলনৰ জন্মদাতা তাৰানা বাকৰ আছিল আফ্ৰিকানমূলীয় আমেৰিকাবাসী কৃষ্ণাংগ মহিলা। বাকৰে মি-টু আন্দোলনৰ পাতনি মেলিছিল একবিংশ শতিকাত। কিন্তু তেওঁৰ মনত এই বীজ অংকুৰিত হৈছিল বিংশ শতিকাতেই। ৪৫ ৰ উৰ্ধৰ এই মহিলাগৰাকী সমাজকৰ্মী। বিভিন্ন স্থানত ঘূৰি ফুৰা তাৰানা বাকৰ বিভিন্ন সমাজৰ নাৰী সম্পৰ্কে বিপুল অভিজ্ঞতা আছে। বিংশ শতিকাৰ দেশৰ দশকত তাৰানা বাকৰে ১২ বাৰ বছৰীয়াগৰাকী কিশোৰীৰ মুখেৰে তেওঁৰ মাকৰ পুৰুষ বন্ধু (প্ৰেমিক?) আৰু সতীয়া দেউতাকৰ দ্বাৰা নিৰ্যাতিত হোৱাৰ কথা শুনে, যি কথা কিশোৰীগৰাকীয়ে কাৰো আগত খুলি ক'ব পৰা নাছিল। তেতিয়া বাকৰ মনত কেনে প্ৰতিক্ৰিয়া হৈছিল সেই সম্পৰ্কত এটা সাক্ষাৎকাৰত তেওঁ কৈছিল—"I didn't have a response or a way to help her in that movement, and couldn't even say 'me too',...It really bothered me, and st in my spirit for a long time."

হয়তো কিশোৰীগৰাকীৰ এই হৃদয়বিদাৰক কাহিনীয়ে তাৰানা বাকৰক সচকিত কৰি তুলিছিল। তেওঁ উপলব্ধি কৰিছিল যে আধুনিক শিক্ষিত নাৰীও কোনোবাখিনিত শোষিত, লাঞ্চিত হৈ আছে। বিভিন্ন ঠাইত লগ পোৱা বহুনাৰীৰ এনে কাহিনী তেওঁ শুনিছিল, বহুনাৰীৰ সৈতে একেলগে সম্পৰ্ক কৰা পুৰুষো তেওঁ দেখিছিল। তেওঁৰ মনত ভাব হৈছিল ইও এক প্ৰকাৰ নাৰীৰ ওপৰত শোষণ-নিৰ্যাতন। তাৰানা বাকৰ নিজেও আছিল এগৰাকী ভুক্তভোগী নাৰী। তাৰানা বাকৰে ৬ বছৰ বয়সতে প্ৰতিৰেশী পুৰুষ এজনৰ হাতত নিৰ্যাতিত হৈছিল। জীৱনৰ পৰৱৰ্তী সময়ছোৱাতো তেওঁ যৌন উৎপীড়নৰ বলি হৈছিল। এনেবোৰ কাৰণেই ২০০৬ চনত জন্ম দিলে তাৰানা বাকৰ হাতত মি-টু আন্দোলনৰ।

২০০৬ চনতে আৰম্ভ হোৱা 'My Sapce' নামৰ ছ'চিয়েল মিডিয়াৰ পেজটো সেই সময়ত অধিক শক্তিশালী হৈ উঠিছিল। পোন প্ৰথমে 'My Sapce' পেজতে তাৰানা বাকৰে হেঞ্চটেগ মি-টু ব্যৱহাৰ কৰি এটা পোষ্ট লিখিছিল আৰু এনে যৌন উৎপীড়নৰ বলি হোৱা সকলো মহিলাকে সামাজিক মাধ্যমৰ যোগেদি নিজৰ কাহিনী ব্যক্ত কৰিলে। যৌন উৎপীড়নৰ বলি হোৱা সকলো মহিলাক নিৰাপত্তা দিয়াই আছিল বাকৰ মি-টু আন্দোলনৰ উদ্দেশ্য—"Movements are long, and they are built over time. Movements are made from moments...If you are ready to change the world, If you are ready to join this movement, if you are ready to do the work that is necessary to end several violence, I can only leave you with these two words: Me too."^২

কিন্তু ২০০৬ চনত আৰম্ভ হোৱা তাৰানা বাকৰ Me Too আন্দোলনে বিশেষ প্ৰসাৰতা লাভ কৰিব নোৱাৰিলে। পৰৱৰ্তী সময়ত হলিউডৰ চলচ্চিত্ৰ ক্ষেত্ৰখনৰ মাজেৰে মি-টু আন্দোলন জনপ্ৰিয় হৈ পৰে।

১.২ হলিউড আৰু মি-টু :

তাবানা বার্ক ২০০৬ চনত আৰম্ভ কৰা মি-টু আন্দোলনে গতি লাভ কৰে ২০১৭ চনত হলিউডৰ চলচ্চিত্ৰকেন্দ্ৰিক ক্ষেত্ৰখনৰ মাজেদি। ২০১৭ চনৰ ৫ অক্টোবৰত নিউয়ৰ্ক টাইম্ছত প্ৰথমবাৰৰ বাবে বিখ্যাত চলচ্চিত্ৰ প্ৰযোজক হাৰ্ভে বেনষ্টেইনৰ বিৰুদ্ধে ৭০ গৰাকী মহিলাই দিয়া গুৰুতৰ অভিযোগৰ বাতৰি প্ৰকাশ পায়। ইয়াৰ পাছতে, সেই মাহৰ ১৫ তাৰিখে এলিছা মিলানোই **Me Too** আন্দোলনৰ আৰম্ভণি কৰে এক টুইটযোগে। ইয়াৰ সমৰ্থনত সেইদিনা ৰাতিটোৰ ভিতৰতে ৫ লাখতকৈ অধিক লোকে টুইট কৰে।

এলিছা মিলানোৰ এই টুইটৰ পাছত **Me Too** আন্দোলনে গোটেই বিশ্বতে এক আলোড়ন তোলে। NBC News ৰ এটা ফোন-ইন সাক্ষাৎকাৰত মিলানোয়ে কৈছিল, "The most beautiful thing from all of this is not only women standing up and using their voices, but standing up for each other in solidarity. ...The collective pain we've felt has turned into a collective power."*

এলিছাই টুইটযোগে যৌন উৎপীড়নৰ বলি হোৱা মহিলাক নিজৰ কাহিনী ব্যক্ত কৰিবলৈ অনুৰোধ জনোৱাৰ লগে লগে ("যদি আপোনালোক যৌন উৎপীড়নৰ বলি হৈছে, এই টুইটত সমৰ্থন হিচাপে 'মি-টু' বুলি লিখক) লেডি গাগা (Lady Gaga), বায়োলা ডেভিছ (Viola Devis), জেভিয়াৰ মুন'জ (Javier Munoz), ইভান ৰাছেল উড (Evan Rachel Wood) আদি বিখ্যাত চেলিব্ৰিটিয়েও সমৰ্থন জনায়।

এলিছা মিলানোৰ টুইটৰ পাছত ফেচবুক যোগেও ২৪ ঘণ্টাৰ ভিতৰতে **#Me Too** ব্যৱহাৰৰ দ্বাৰা এক লাখ বিশ হাজাৰ প'ষ্ট আহিছিল। ইয়াৰ ভিতৰত ৪৫ শতাংশ লোক আছিল আমেৰিকাৰ। বহু সংখ্যক অভিনেত্ৰী আৰু মডেলে প'ষ্ট যোগে ব্যক্ত কৰে যে হাৰ্ভে বেনষ্টেইনে কাম দিয়াৰ বাবদ তেওঁলোকৰ ওপৰত যৌন উৎপীড়ন চলাইছিল। মি-টু আন্দোলনৰ যোগেদি প্ৰথম অভিযুক্ত হোৱা হাৰ্ভে বেনষ্টনৰ সৈতে চুক্তিত স্বাক্ষৰিত হোৱা বহু লোকে পৰৱৰ্তী সময়ত তেওঁৰ সৈতে কাম কৰিবলৈ অস্বীকাৰ কৰে। হলিউডৰ চিত্ৰ পৰিচালক হাৰ্ভেৰ পাছত লাহে লাহে মিউজিক ইণ্ডাষ্ট্ৰী, ৰাজনীতি আদিতো মি-টু-এ আলোড়ন তুলিবলৈ সক্ষম হয়। চিত্ৰ পৰিচালক বেনষ্টেইনৰ বিৰুদ্ধে অভিযোগ অনা অভিনেত্ৰীসকলৰ ভিতৰত ইটালীয়ান অভিনেত্ৰী আৰ্ছিয়া আৰ্জেণ্টোই মুখ্য ভূমিকা লৈছিল। পৰৱৰ্তী সময়ত আৰ্ছিয়া আৰ্জেণ্টোৰ বিৰুদ্ধেই বলিউড অভিনেতা তথা সংগীতশিল্পী জিমি বেনেটে যৌন নিৰ্যাতনৰ অভিযোগ আনে। নিউয়ৰ্ক টাইমত প্ৰকাশিত বাতৰি অনুসৰি এবাৰ কেলিফোৰ্ণিয়াৰ এখন হোটেলত আৰ্ছিয়াই জিমি বেনেটৰ ওপৰত যৌন নিৰ্যাতন চলায় বুলি অভিযোগ উত্থাপিত হৈছে। তেতিয়া আৰ্ছিয়াৰ বয়স আছিল ৩৭ বছৰ আৰু জিমিৰ বয়স আছিল ১৭ বছৰ। কেলিফোৰ্ণিয়াৰ স্থানীয় আইন অনুসৰি যৌনকৰ্মৰ বাবে নূন্যতম বয়স হ'ল ১৮ বছৰ। গতিকে ইয়াৰ বাবে আৰ্ছিয়া অভিযুক্ত হোৱাত ৩ লাখ ৮০ হাজাৰ ডলাৰ দি জিমিৰ মুখ বন্ধ কৰিবলৈ চেষ্টা চলোৱা বুলিও অভিযোগ উঠিছিল।*

হাৰ্ভে বেনষ্টেইনৰ বিৰুদ্ধে উঠা বিপুল অভিযোগৰ পাছতে ২০১৭ চনৰ ১২ নৱেম্বৰত হলিউডৰ অভিনেত্ৰীসকলৰ সহযোগত তাবানা বার্কৰ নেতৃত্বত ৰাজপথত ন্যায়াৰ দাবীত এক সমদল ওলায়। 'Yes means yes, No means No' বুলি প্ৰতিশ্ৰুতি দিয়া প্ৰতিবাদী সমদলটোত বহুসংখ্যক সমৰ্থনকাৰী পুৰুষেও অংশ লৈছিল। সেই বছৰৰে ৯ ডিচেম্বৰত 'Trump International Hotel' ৰ বাহিৰত আৰু এটা সমদল উলিওৱা হৈছিল। ২০১৮ চনৰ আন্তঃৰাষ্ট্ৰীয় নাৰী দিৱসৰ উপলক্ষে উলিওৱা দক্ষিণ কোৰিয়াৰ সমদলত

উত্থাপন কৰা মূল বিষয়সমূহৰ ভিতৰত মি-টু আন্দোলনকো ঠাই দিয়া হয়।

হলিউডত ২০১৭ চনতহে যৌন উৎপীড়নৰ বিৰুদ্ধে মহিলাই মুকলিকৈ প্ৰতিবাদ কৰে যদিও একবিংশ শতিকাৰ আৰম্ভণিতে ডেভিদ ব'ছৰ বিৰুদ্ধে ২০ বছৰীয়া অভিনেত্ৰী পেট্ৰিছিয়া ডগ'লাছে অভিযোগ আনিছিল। ডেভিদ ব'ছে পেট্ৰিছিয়াৰ ওপৰত চলোৱা যৌন উৎপীড়নৰ বিৰুদ্ধে মিডিয়াৰ আগতো প্ৰকাশ কৰাৰ চেষ্টা কৰিছিল। কিন্তু বহুসংখ্যকভাৱে সকলো লুকুৱাই ৰখা হৈছিল। অতি পৈশাচিকভাৱে তেওঁ নিৰ্যাতিত হৈছিল ডেভিদ ব'ছৰ হাতত। ডগলাছে অতি হৃদয়স্পৰ্শকৈ গৈছিল—"When I die, the truth dies with me, and that means these bastards win."^৫

পাশ্চাত্যৰ দেশবোৰত মি-টু আন্দোলনে এক শক্তিশালী ভূমিকা গ্ৰহণ কৰিলে ২০১৭ চনৰ ভিতৰতে। বহু নাৰীয়ে নিঃসংকোচে সামাজিক মাধ্যমৰ আগত নিজৰ সৈতে হোৱা নিৰ্যাতনৰ কথা প্ৰকাশ কৰিলে। কিন্তু মি-টুৱে সকলো ভুক্তভোগী নাৰীৰ কাষ চাপিব পাৰিলেনে নাই সি আজিও এটা প্ৰশ্ন হৈয়ে ৰ'ল। কিন্তু আমেৰিকাত আৰম্ভ হোৱা মি-টু আন্দোলনে কৰ্মক্ষেত্ৰত যৌন উৎপীড়নৰ বলি হোৱা মহিলাৰ সমস্যাৰ গোলকীয় সমস্যা হিচাপে তুলি ধৰাত বিশেষ ভূমিকা গ্ৰহণ কৰিলে।

২.০ ভাৰত আৰু বাংলাদেশত মি-টু আন্দোলনৰ প্ৰভাৱ :

হলিউডত মি-টু আন্দোলনে আলোড়ন তুলিবলৈ সক্ষম হোৱাৰ পাছত ইয়াৰ প্ৰভাৱ প্ৰায় ৮৬ খন দেশলৈ লগে লগে বিয়পি পৰে। বৰ্তমান আমেৰিকাৰ নিবাসী তথা এসময়ৰ বলিউডৰ শক্তিশালী অভিনেত্ৰী তনুশ্ৰী দত্তই ২০১৮ চনৰ ছেপ্তেম্বৰ মাহত ভাৰতলৈ আহি ১০ বছৰৰ আগতে নানা পাটেকাৰৰ হাতত সন্মুখীন হোৱা অবাঞ্ছিত অভিজ্ঞতাৰ কথা পুনৰবাৰ উত্থাপন কৰে। ইয়াৰ পৰাই ভাৰতত মি-টু আন্দোলন আৰম্ভ হ'ল বুলি কোৱা হয় যদিও এই সম্পৰ্কত তনুশ্ৰী দত্তৰ দ্বিমত আছে। তনুশ্ৰীৰ মতে তেওঁ ভাৰতলৈ কৰ্মবিৰতিৰ বাবেহে আহিছিল। মি-টু ভাৰতলৈ তেওঁ অনা নাই, আনিছে সংবাদ মাধ্যমে। তদুপৰি মি-টু আন্দোলনৰ বাবে যি পৰিৱেশৰ প্ৰয়োজন সেয়া ভাৰতে সৃষ্টি কৰিব পৰা নাই। দহ বছৰৰ আগতে তেওঁ যি অভিযোগ কৰিছিল, এতিয়াও তাকেহে উত্থাপন কৰিছে।

ভাৰতত মি-টু আন্দোলন বাটকটীয়া তনুশ্ৰী দত্তই ২০০৮ চনতে আৰক্ষী বিবাগ আৰু মহাৰাষ্ট্ৰ মহিলা আয়োগত অভিযোগ দাখিল কৰিছিল। ২০০৮ চনত 'Horn OK! Please' নামৰ ছবিখনৰ দৃশ্যগ্ৰহণৰ সময়ত তেওঁ সন্মুখীন হোৱা অপ্ৰীতিকৰ পৰিস্থিতিৰ লৈ তেতিয়াই সেই অভিযোগ দাখিল কৰিছিল। ছবিখনৰ এটা গীতৰ দৃশ্যগ্ৰহণ কৰি থাকোঁতে নৃত্য পৰিচালক গণেশ আচাৰ্যই তেওঁক নানা পাটেকাৰৰ সৈতে অন্তৰংগ দৃশ্য কৰাৰ বাবে কয় আৰু তনুশ্ৰীয়ে মানি নোলোৱাক গণেশ আচাৰ্যৰ পৰা গালি-গালাজৰ সন্মুখীন হয়। গানৰ দৃশ্যগ্ৰহণৰ মাজতে নানা পাটেকাৰে তনুশ্ৰীক অসংযতভাৱে স্পৰ্শ কৰাৰ চেষ্টা কৰিছিল বুলিও তনুশ্ৰীয়ে কৈছিল।

বলিউডৰ ক্ষেত্ৰখনত দেখা গ'ল যে অভিযোগ-প্ৰতি অভিযোগবোৰত বহুতেই কোনো মন্তব্য নিদি গা এৰাই চলিবলৈ চেষ্টা কৰিছিল। আকৌ আন কোনো কোনোৱে পক্ষপাতিত্ব কৰাৰ চেষ্টাও কৰিছিল। বলিউড অভিনেত্ৰী ৰাখি ছৱান্তে তনুশ্ৰী দত্তৰ অভিযোগ সম্পূৰ্ণ ভুৱা বুলি সংবাদ মাধ্যমৰ আগত প্ৰকাশ কৰিছিল। 'Horn OK! Pleasss' নামৰ ছবিখনত পাছত তনুশ্ৰীৰ ঠাইত ৰাখি ছৱান্তক অনা হৈছিল। সংবাদ মাধ্যমত ৰাখিৰ মন্তব্যই নানা পাটেকাৰৰ প্ৰতি পক্ষপাতিত্বকে বুজায়। ৰাখি ছৱান্তে তনুশ্ৰীক অভিযোগ সম্পূৰ্ণ মিছা বুলি

কৈছিল। আন এটা সাক্ষাৎকাৰত ৰাখি ছৱান্তে তনুশ্ৰী দত্তৰ ওপৰত অভিযোগ আনি কয় যে তনুশ্ৰী দত্ত এগৰাকী লেছবিয়ান আৰু বাৰ বছৰৰ আগতে তনুশ্ৰীয়ে ৰাখিৰ ওপৰত যৌন নিৰ্যাতন চলাইছিল। ৰাখিয়ে অনা অভিযোগ মতে তনুশ্ৰীয়ে জোৰ কৰি দুই-এবাৰ ৰাখিক ড্ৰাগছ ল'বলৈও দিছিল।^১ ৰাখিয়ে আলোক নাথৰ ওপৰত অনা অভিযোগো সম্পূৰ্ণ মিচা বুলি কৈছিল। আন এক সাক্ষাৎকাৰত ৰাখিয়ে কোৱা মতে বলিউডৰ কেতিয়াও বলাৎকাৰ নহয়, বৰঞ্চ নিজকে প্ৰতিষ্ঠা কৰিবলৈ ছোৱালীবোৰে উপযাচি পৰিচালক-প্ৰযোজক আদিৰ ওচৰত নিজকে অৰ্পণ কৰে। (উৎস—<http://youtu.be/cZoEsMLCEK>) আৰক্ষীয়ে সেই সময়ত শ্বুটিঙত উপস্থিত থকা বহুজনৰ সাক্ষ্য গ্ৰহণ কৰোঁতে সকলোৰে পুৰণি কথা পাহৰা বুলি কৈছিল। মাত্ৰ তেওঁলোকৰ ইমানেই মনত আছে যে শ্বুটিঙত সেইদিনা বহুত দেৰি হৈছিল। নানা পাটেকাৰে সংবাদ মাধ্যমৰ আগত ইমানেই কয় যে—দহবছৰ আগত যি সঁচা নাছিল, সেয়া আজি কেনেকৈ সঁচা হ'ব! এইবিষয়ে তেওঁ তেতিয়া যি কৈছিল, আজিও সেই একে কথাকে ক'ব। তনুশ্ৰীৰ অভিযোগৰ পাছত মিছা অপবাদেৰে সন্মান হানি কৰা বুলি তেওঁ তনুশ্ৰীৰ ওপৰত অভিযোগ দাখিল কৰিছিল।

তনুশ্ৰী আৰু নানা পাটেকাৰৰ সম্পৰ্কত বিভিন্নজনে ভিন ভিন মন্তব্য আগবঢ়াইছে। অমিতাভ বচ্চনে এই সম্পৰ্কত কৈছিল যে —মই নানা পাটেকাৰো নহয়, তনুশ্ৰী দত্তও নহয়। এই সম্পৰ্কত মই কেনেকৈ ক'ম! চলমান খানেও এই সম্পৰ্কত তেওঁ সচেতন নহয় বুলি গা এৰাই চলা দেখা গ'ল। ঐশ্বৰ্য ৰায়, অক্ষয় কুমাৰ, ৰীতিক ৰৌছন, আমিৰ খান আদি বহুতো অভিনেতা-অভিনেত্ৰীয়ে মি-টুৰ প্ৰতি সমৰ্থন আগবঢ়াইছিল আৰু কোনো কোনোৱে এনে অভিযোগ উঠা লোকৰ সৈতে কাম কৰিবলৈ অস্বীকাৰ কৰিছিল।

নানা পাটেকাৰৰ পাছতে বলিউডৰ জগতখনত সংস্কাৰী ব্যক্তিকৰূপে পৰিচিত আলোক নাথৰ বিৰুদ্ধে চলচিত্ৰ প্ৰযোজক তথা লেখিকা বিনীতা নন্দাই বলাৎকাৰৰ অভিযোগ আনিছিল। বিনীতা নন্দাই কৰা অভিযোগ অনুসৰি আজিৰ পৰা ১৯-২০ বছৰৰ আগতে তেওঁ ধৰ্ষিতা হৈছিল। তেওঁ কৰা ফেচবুক পোষ্টটোত আলোক নাথৰ নাম প্ৰত্যক্ষভাৱে উল্লেখ কৰা নাছিল যদিও 'সংস্কাৰী' শব্দৰ দ্বাৰা তেওঁকে বুজাব বিচাৰিছিল আৰু এই পোষ্টটোৰ পাছতেই আলোক নাথে সংবাদ মাধ্যমৰ আগত মন্তব্য প্ৰদান কৰাটো মন কৰিবলগীয়া বিষয়। বিনীতা নন্দাৰ ফেচবুক পোষ্ট অনুসৰি এবাৰ কোনো নথকাৰ সুযোগ লৈ আলোক নাথে আৰু বিনীতাক নিমন্ত্ৰণ কৰিছিল। বিনীতাৰ পানীয়ত কোনো ঔষধ মিহলোৱাৰ ফলত তেওঁ সুস্থভাৱে থাকিবপৰা নাছিল। অভিযুক্ত ব্যক্তিয়ে তেওঁক গাড়ীৰে থ'বলৈ প্ৰস্তাৱ আগবঢ়ায়। বিনীতাই তাক মানি লৈ গাড়ীত বহাৰ লগে লগে বিনীতাৰ মুখলৈ সুৰা ছটিয়াই দিছিল। ইয়াৰ পাছতেই বিনীতা অজ্ঞান হৈ পৰিছিল। পাছদিনা জ্ঞান ঘূৰাই পাই বিনীতাই নিজক আৱিষ্কাৰ কৰিছিল এক নতুন পৰিস্থিতিত। সংঘটিত হোৱা বলাৎকাৰে সম্পৰ্কে বিনীতা নন্দা অৱগত হৈছিল।

অভিনেত্ৰী সন্ধ্যা মৃদুলেও আলোক নাথৰ ওপৰত যৌন নিৰ্যাতনৰ অভিযোগ আনিছিল। কেৰিয়াৰৰ আৰম্ভণিতে এখন টেলিফিল্মৰ শ্বুটিঙৰ সময়ত এবাৰ হোটেলত থাকোঁতে এবাৰ সুৰাৰ নিচাত আলোক নাথে সন্ধ্যাৰ কোঠালৈ গৈ 'তুমি মোৰ' আদিৰ দৰে অসংযত কথা ক'বলৈ ধৰিলে। তাৰ আগমুহূৰ্ততো নৈশ ভোজনৰ সময়ত সুৰামত্ত হৈ আলোক নাথে সন্ধ্যাক এনেধৰণৰ কথা কৈছিল। সন্ধ্যাই কোনোৰকমে বাহিৰলৈ ওলাবলৈ সক্ষম হ'ল। পাছত এনে কামৰ বাবে সন্ধ্যাক আলোক নাথে ক্ষমা খুজে যদিও সন্ধ্যাই কাম শেষ কৰি মুম্বাইলৈ ঘূৰি অহাৰ পাছত সন্ধ্যাৰ বিৰুদ্ধে নানান কথা ক'বলৈ ধৰে। আলোক নাথৰ সৈতে এনেকুৱা সৰু-সুৰা দুই-এটা

অভিজ্ঞতাৰ সন্মুখীন হোৱা বুলি দীপিকা আমিন, বেণুকা শ্বাহনে আদি অভিনেত্ৰীওে প্ৰকাশ কৰে। তেওঁলোকৰ মতে আলোক নাথ এজন অতি ভদ্ৰ, সকলোকে সন্মান কৰিব জনা ব্যক্তি। কিন্তু সুৰাৰ নিচাত তেওঁ সলনি হয় আন এজন হিংস্ৰ দানৱলৈ। এনে অভিজ্ঞতাৰ মুখামুখি হৈয়েই নৱনীত নিশালে আলোক নাথক চৰ সোধাইছিল।

এনেদৰে মি-টু আন্দোলনে বলিউডৰ বহু প্ৰভাৱশালী অভিনেতা, পৰিচালক আদিৰ বিৰুদ্ধে অভিযোগ আনে। সংগীত পৰিচালক অনু মালিকৰ বিৰুদ্ধে কণঠশিল্পী শ্বেতা পণ্ডিতেই ফেচবুক পোষ্ট যোগে অভিযোগ আনিছিল। যেতিয়া তাইৰ ৰপ্ত বহুৰ বয়স আছিল অনু মালিকৰ পৰা অবাঞ্ছিত পৰিস্থিতিৰ সন্মুখীন হৈছিল। শ্বেতাক চান আৰু সুনিধিৰ সৈতে গীত গোৱাৰ সুবিধা দিয়াৰ বাবদ তাইৰ পৰা চুমা আদায় কৰাৰ চৰ্ত ৰাখিছিল। নাম উল্লেখৰ বাবে অনিচ্ছুক দুগৰাকী মহিলাই 'Midday' কাকতৰ জৰিয়তে অভিযোগ আনিছিল যে অনু মালিকে তেওঁলোকক ষ্টুডিঅ'ৰ ভিতৰতে টনা-আঁজোৰা কৰি যৌন উৎপীড়নৰ চেষ্টা চলাইছিল। তাৰে এগৰাকী মহিলাৰ অভিযোগ অনুসৰি তেওঁৰ গাড়ীৰ ভিতৰতো টনা-আঁজোৰা কৰি যৌন সম্পৰ্ক স্থাপনৰ চেষ্টা চলাইছিল অনু মালিকে।

চলমান খানৰ বিৰুদ্ধেও পূজা মিশ্ৰই সামাজিক মাধ্যমত ভিডিঅ'ৰ যোগেদি প্ৰকাশ কৰিছিল যে চলমান খান আৰু তেওঁৰ দুই ভ্ৰাতৃয়ে দিল্লীত পূজাক বলাৎকাৰ কৰিছিল। লগতে সোণাক্ষী সিন্‌হাক সেই ঠাইত প্ৰতিষ্ঠিত কৰিবলৈ শত্ৰু সিন্‌হাৰ পৰিয়ালৰ সৈতে লগ লাগি পূজাৰ ওপৰত যাদু প্ৰয়োগো কৰিছিল। চলমান খানেই পূজাৰ কেৰিয়াৰ নষ্ট কৰা বুলি অভিযোগ আনিছিল। এই বাতৰিক লৈ বলিউডৰ প্ৰায়সংখ্যক লোকেই জাঙৰ খাই উঠিছিল। উল্লেখযোগ্য যে ২০১৫ চনতে পূজা মিশ্ৰই এনে অভিযোগৰ গোচৰ তৰিছিল যদিও সি সম্পূৰ্ণ মিছা বুলি প্ৰতিপন্ন হৈছিল। ৰাখি ছ্ৰান্তে আলোক নাথ, অনু মালিক, চলমান খান আদিক স্পষ্টকৈ পক্ষপাতিত্ব কৰা দেখা গৈছিল।

সেইদৰে চলচ্চিত্ৰ পৰিচালক বিকাশ বেহেলৰ ওপৰত এগৰাকী মহিলাই অনা অভিযোগক সমৰ্থন কৰি অভিনেত্ৰী কংগনা ৰাওতেও বিকাশ বেহেলৰ দ্বাৰা নিজে যৌন উৎপীড়নৰ কথা ব্যক্ত কৰিছিল। অভিনেত্ৰী চনম কাপুৰে বিকাশ বেহেলক সমৰ্থন কৰি কংগনাক তিৰষ্কাৰ কৰাৰ বাতৰিও সংবাদ মাধ্যমত প্ৰকাশিত হৈছিল। চাজিদ খানৰ ওপৰতো কৰিখা উপাধ্যায়, চেলোনী চোপ্ৰা, আহানা কোৰ্মা, চিমৰান সুৰী, মন্দনা কাশ্মিৰী আদি বহুসংখ্যকে যৌন নিৰ্যাতনৰ অভিযোগ তোলে। পৰৱৰ্তী সময়ত অক্ষয় কুমাৰে চাজিদ খানৰ ছবিত কাম কৰিবলৈ অস্বীকাৰ কৰিছিল। পৰৱৰ্তী সময়ত বৰুণগ্ৰোভ, বিবেক অগ্নিহোত্ৰী, শ্ৰীউৎসৱ চক্ৰৱৰ্তী, ৰজত কাপুৰ, কৈলাশ খেৰ, চেতন ভগত আদি সংগীত শিল্পী, অভিনেতা, লেখক আদি ব্যক্তিৰ বিৰুদ্ধেও যৌন নিৰ্যাতনৰ অভিযোগ উঠিছিল। বহুতেই ফেচবুক বা টুইটাৰ যোগে নিজৰ ভুল স্বীকাৰ কৰি ক্ষমা বিচাৰিছিল। একাংশই এনে অভিযোগ মানি ল'বলৈ অস্বীকাৰ কৰি খণ্ডন কৰাৰ চেষ্টা কৰিছিল। বহুতৰ গোচৰ আদালতত চলি আছে।

ভাৰতত মি-টু আন্দোলনে পৰিৱৰ্তন অনা আন এখন উল্লেখযোগ্য ক্ষেত্ৰ আছিল ৰাজনীতি। ভাৰতৰ বিদেশ মন্ত্ৰী এম. জে. আকবৰৰ প্ৰতি ২০ গৰাকীতকৈ অধিক মহিলাই যৌন উৎপীড়নৰ অভিযোগ আনে, যাৰ ফলত পৰৱৰ্তী সময়ত তেওঁ পদত্যাগ কৰিবলৈ বাধ্য হৈছিল। প্ৰিয়া ৰমনী, প্ৰিয়া সিংহ, বিন্দা তুষিতা মেহতা আদি অনেক সাংবাদিকে এম. জে. আকবৰৰ বিৰুদ্ধে অভিযোগ আনিছিল। আকবৰে প্ৰিয়া ৰমনীৰ বিৰুদ্ধে মান হানিৰ গোচৰ তৰে, যিটো এতিয়াও আদালতত চলি আছে। আমেৰিকা নিবাসী অসমীয়া মহিলা সাংবাদিক পল্লৱী গগৈয়ে এম. জে. আকবৰৰ বিৰুদ্ধে বলাৎকাৰৰ অভিযোগ আনিছিল। এসময়ত আকবৰৰ 'Asian

Age' ত কাম কৰোঁতে পল্লৱী গগৈক কামৰ অচিলাৰে কেইবাবাৰে চুফন কৰাৰ চেষ্টা কৰিছিল আৰু শেষত জয়পুৰত হোটেললৈ মাতি নি বলাৎকাৰ কৰা বুলি অভিযোগ আনিছে। এয়া হ'ল ২০/২১ বছৰৰ আগৰ কথা। তেতিয়া পল্লৱীৰ বয়স আছিল ২৩ বছৰ।

ভাৰতত মি-টু আন্দোলনৰ সময়তে আন এক সত্য পোহৰলৈ আহিছিল। লেছবিয়ানসকলে মহিলাৰ ওপৰত চলোৱা যৌন উৎপীড়নক কেন্দ্ৰ কৰি সেই সময়ত বহুকেইটা অভিযোগ উত্থাপিত হৈছিল। ৰাখি ছৰায়ে তনুশ্ৰী দত্তৰ ওপৰত এনে অভিযোগ তুলিছিল। কানীজ চুৰ্কায়ো সহকাৰী কমেডিয়ান অদিতি মিটালৰ ওপৰত যৌন নিৰ্যাতনৰ অভিযোগ আনিছিল। আজিৰ পৰা দুই তিনি বছৰ আগতে মুম্বাইৰ এখন মঞ্চত অনুষ্ঠান পৰিৱেশন কৰি থকাৰ মাজতে দৰ্শক আৰু মিডিয়াৰ সন্মুখতে অদিতিয়ে কানীজক ওঁঠত চুমা খোৱাৰ লগতে জোৰকৈ নিজৰ জিভা কানীজৰ মুখত ভৰাই দিয়া বুলি অভিযোগ তুলিছিল। অদিতিয়ে কানীজক ক্ষমা বিচাৰিছিল যদিও পাছত ৰাজহুৱাকৈ ক্ষমা বিচাৰিবলৈ কোৱাত অদিতিয়ে সমগ্ৰ ঘটনাকে অস্বীকাৰ কৰে।

ভাৰতত মি-টু আন্দোলনক লৈ সজাগতা সৃষ্টিৰ বাবে বহুতো প্ৰতিষ্ঠানে চুটি ছবি নিৰ্মাণ কৰি উলিয়াইছে। উল্লেখযোগ্য যে হলিউডত 'Sony movie' এ ২০১৮ চনতে আমাই পাচকেলৰ প্ৰযোজনাত আৰু জোৱাকুইম ডচেন্ত্চৰ পৰিচালনাত মি-টু আন্দোলনৰ ভেটিত বিগত তিনি দশকৰ নাৰীসকলৰ সংগ্ৰাম, বলিষ্ঠতা আৰু সাহসিকতাৰ কথা তুলি ধৰি 'Spider Woman' নামৰ চলচ্চিত্ৰ নিৰ্মাণৰ পৰিকল্পনা কৰিছিল।

ভাৰতৰ লগতে ইয়াৰ অতি চুবুৰীয়া দেশ বাংলাদেশকো সমসাময়িকভাৱে মি-টু আন্দোলনে আলোড়িত কৰিছিল। ২০১৮ চনৰ ২৯ অক্টোবৰত বাংলাদেশৰ ৰংধনু দলৰ চেয়াৰমেন ৰফিকুল ইছলামৰ বিৰুদ্ধে আয়াৰলেণ্ড প্ৰবাসী বিখ্যাত মডেল আন্তাৰ প্ৰিয়তিয়ে যৌন উৎপীড়নৰ অভিযোগ আনে। পৰৱৰ্তী সময়ত ডিবিচি টেলিভিছনৰ সাংবাদিক প্ৰণৱ সাহাৰ বিৰুদ্ধে এসময়ৰ তেওঁৰ সহকৰ্মী তথা প্ৰেমিকা শুচিস্মিতা সীমন্তিয়ে তেওঁৰ সৈতে কাম কৰাৰ সময়তেই আপত্তিজনকভাৱে শুচিস্মিতাৰ শৰীৰত স্পৰ্শ কৰা বুলি ৪ নৱেম্বৰত প্ৰণৱ সাহাৰ অফিচ কৰ্তৃপক্ষক ই-মেইল যোগে লিখিত অভিযোগ দাখিল কৰিছিল। ইয়াৰ পাছত সাংবাদিক জামিল আহমেদৰ বিৰুদ্ধে, 'ডেইলি ষ্টাৰ' কাকতৰ কূটনৈতিক প্ৰতিবেদক ৰেজাউল কৰিম লোটাচৰ বিৰুদ্ধে এসময়ৰ তেওঁৰ সহকৰ্মী আলফা আৰজুৱে তোলা অভিযোগ, ১০ নৱেম্বৰত প্ৰকাশন প্ৰতিষ্ঠান 'পাঠক সমাৱেশৰ' কৰ্ণধাৰস্বৰূপ ইছলাম বিজুৰ বিৰুদ্ধে অভিনেত্ৰী তাছনুভা আনানৰ অভিযোগ, ১১ নৱেম্বৰত জাকিয়া চুলতানা মুক্তা নামৰ এগৰাকী যুৱতীয়ে আবৃত্তিকাৰ মহিদুল ইছলামৰ বিৰুদ্ধে তোলা অভিযোগ আদি ঘটনাই বাংলাদেশত মি-টু আন্দোলন তুংগত উঠাইছিল।

৩.০ মি-টু আন্দোলন আৰু অসম :

ভাৰতীয় চলচ্চিত্ৰৰ বলিউডৰ ক্ষেত্ৰখনত মি-টু আন্দোলনে ভূমুকি মৰাৰ লগে লগে এই বাতৰি বিভিন্ন কাকতত প্ৰচাৰিত হ'বলৈ ধৰিলে। সংবাদ মাধ্যম, ফেচবুক, টুইটাৰ, ইউটিউব আদিত মি-টু আন্দোলনে আলোড়ন তুলিবলৈ সক্ষম হ'ল। বলিউডৰ ক্ষেত্ৰখনত সৃষ্টি হোৱা এই আলোড়নে অতি কম সময়ৰ ভিতৰতে অসমকো স্পৰ্শ কৰিলে। ২০১৮ চনৰ ১৯ অক্টোবৰত অসমৰ এগৰাকী আগশাৰীৰ সাংবাদিক, লেখক সৰিতা লহকৰে তেওঁৰ ওপৰত চলা যৌন উৎপীড়নৰ কথা প্ৰকাশ কৰি এটা ফেচবুক প'ষ্ট কৰে। প'ষ্টটোৰ সৈতে তেওঁ ৰাষ্ট্ৰপতি, অসম ৰাজ্যিক মহিলা আয়োগ, অসম মানৱ অধিকাৰ আয়োগ আদিলৈ এই সম্পৰ্কত ন্যায়

বিচাৰি কৰা আবেদন পত্ৰও সংযোগ কৰে।

প'ষ্টটোৰ কোনো ঠাইতে তেওঁ স্পষ্টকৈ 'মি-টু' শব্দটো উল্লেখ নকৰিলেও এই সময়ছোৱাত আছিল সকলোৱে মি-টুৰ আলোড়ন আৰু তাৰ দ্বাৰা তেওঁ প্ৰভাৱিতও আছিল। সেয়েহে সবিতা লহকৰ এই প'ষ্টটোৱে অসমলৈ মি-টু আন্দোলনৰ টো কঢ়িয়াই আনিলে বুলিব পাৰি। সবিতা লহকৰে ২০১৮ চনৰ অক্টোবৰ মাহত প্ৰাগ নিউজৰ শান্তনু মহন্তৰ সৈতে হোৱা 'সবিশেষ' অনুষ্ঠানত আৰু 'নৰ্থ-ইষ্ট নাউ'ৰ এটা সাক্ষাৎকাৰত তেওঁৰ সৈতে হোৱা সকলো কথা বিৱৰি প্ৰকাশ কৰিছিল। ২০০০ চনতে সবিতা লহকৰ অসমৰ বিশিষ্ট বুদ্ধিজীৱি হোমেন বৰগোহাঞিৰ হাতত যৌন উৎপীড়নৰ বলি হৈছিল। তেতিয়া 'আমাৰ অসম' কাকতত হোমেন বৰগোহাঞি সম্পাদক আৰু সবিতা লহকৰ মুখ্য উপ সম্পাদক হিচাপে কৰ্মৰত আছিল। বিভিন্ন কামৰ গয়না লৈ সবিতা লহকৰক তেওঁ নিজৰ ঘৰলৈ মাতি নিছিল আৰু এদিন (১২ জুন, ২০০০ চন) 'টাষ্ট থেৰাপী'ৰ নামত লহকৰৰ গাত স্পৰ্শ কৰিছিল আৰু জোৰকৈ সাবতি ধৰিছিল। এই সম্পৰ্কে জি.এল. পাৱ্লিকেছনৰ কৰ্তৃপক্ষক লহকৰে জনাইছিল। পৰৱৰ্তী সময়ত সম্পাদকৰ সৈতে যোগাযোগত নহাকৈ তেওঁক 'আমাৰ অসম'ত কাম কৰি থাকিবলৈ ব্যৱস্থা কৰি দিয়া হৈছিল। কিন্তু সিমানতে তেওঁৰ ওপৰত নিৰ্যাতন শেষ হোৱা নাছিল। সুবিধা পালেই হোমেন বৰগোহাঞিয়ে তেওঁক কথাৰে অশ্লীল ইংগিত দিছিল আৰু মানসিকভাৱে ব্যতিব্যস্ত কৰি তুলিছিল। ২০০৩ চনত মহিলা থানাত এই গোচৰ দিছিল। কিন্তু কোনো সঁহাৰি নোপোৱাত ইয়াৰ পাছত পল্টনবজাৰ আৰক্ষী থানা (১৭ ছেপ্তেম্বৰ, ২০০৩), অসম ৰাজ্যিক মহিলা আয়োগ, মানৱ অধিকাৰ আয়োগ, ৰাষ্ট্ৰপতি আদিলৈ তেওঁ লিখিতভাৱে এই গোচৰ প্ৰেণ কৰে। ৰাষ্ট্ৰপতিয়ে দোষীক উপযুক্ত শাস্তি প্ৰদানৰ বাবে লিখিত পত্ৰ সেই সময়ৰ মুখ্য সচিব (জ্যোতি ৰাজখোৱা) লৈ প্ৰেৰণ কৰে যদিও আজিলৈ কোনো ন্যায় নাপালে। সেই সময়ৰ আৰক্ষী সঞ্চালক প্ৰধানে (অসম) সবিতা লহকৰক এই ঘটনা সম্পৰ্কত প্ৰমাণ বিচৰা বুলিও তেওঁ 'নৰ্থ ইষ্ট নাউ'ৰ সাক্ষাৎকাৰটোত কয়।

সবিতা লহকৰে হোমেন বৰগোহাঞিৰ দৰে অসমৰ সকলোৰে সন্মানীয়, প্ৰভাৱশালী বুদ্ধিজীৱিৰ হাতত নিৰ্যাতিত হৈ মৌন হৈ বহি থকা নাছিল। বৰং তেওঁ লগে লগে ইয়াৰ বিপক্ষে যুঁজ দিছিল। 'নৰ্থ ইষ্ট নাউ'ৰ সাক্ষাৎকাৰটোত তেওঁ মি-টু আৰু তেওঁৰ মাজত পাৰ্থক্য থকা বুলিও কৈছিল। কাৰণ মি-টু আৰম্ভ হৈছিল সেইসকল ভুক্তভোগীক লৈ যিসকলে যৌন উৎপীড়নৰ বলি হৈছিল; কিন্তু নিজৰ কেৰিয়াৰত আঘাত পৰাৰ ভয়ত বা ক্ষমতাশালী-প্ৰভাৱশালী লোকৰ বিপক্ষে থিয় দিব নোৱাৰাত গোপনে সেই কথা বুকুত সাঁচি থৈছিল।

সবিতা লহকৰৰ পাছতে ২০১৮ চনৰ ৪ নৱেম্বৰত মাজুলীৰ অতিৰিক্ত আৰক্ষী অধীক্ষক লীনা দলেই এটা ফেচবুক প'ষ্ট কৰে। ২০১২ চনতে লীনা দলেই শীৰ্ষ আৰক্ষী বিষয়া মুকেশ আগৰৱালাৰ পৰা অশ্লীল ইংগিত পাইছিল। অৱসৰ বিনোদনৰ বাবে তেওঁ লীনা দলেৰ সংগ বিচাৰিছিল। এই ইংগিত অস্বীকাৰ কৰি লীনা দলেই সেই সময়ৰ আৰক্ষী সঞ্চালক প্ৰধানক মুকেশ আগৰৱালাৰ বিৰুদ্ধে গোচৰ দিছিল। সেই সময়তে লীনা দলেৰ স্বামীয়ে আত্মহনন কৰিছিল। মুকেশ আগৰৱালাৰ পত্নীয়ে তেওঁৰ স্বামীৰ বিৰুদ্ধে মিছা প্ৰতিবাদ অনা বুলি আদালতত গোচৰ দিছিল। আদালতে লীনা দলেৰ সপক্ষে ৰায়দান কৰে যদিও বিভাগীয় তদন্ত আগ নাবাঢ়িল, দোষীয়ে নাপালে কোনো শাস্তি। এই কথা লীনা দলেই পুনৰবাৰ মি-টু আন্দোলনৰ জৰিয়তে ফেচবুক প'ষ্ট কৰে।

২০১৮ চনৰ অক্টোবৰ মাহৰ শেষৰফালে কংগ্ৰেছী নেত্ৰী, অভিনেত্ৰী ববিতা শৰ্মাই DY 365 ৰ আগত মি-টু আন্দোলনক পূৰ্ণ সমৰ্থন আগবঢ়াইছিল আৰু লগতে ৰাজনৈতিক ক্ষেত্ৰখনত তেৱোঁ তেনে অৱস্থায় সন্মুখীন হোৱা বুলি কৈছিল। এই সম্পৰ্কত তেওঁ কংগ্ৰেছ হাইকমাণ্ডক লিখিত অভিযোগ দিয়া বুলিও কৈছিল। ববিতা শৰ্মাই ভুক্তভোগী নাৰীক মুকলিকৈ সকলো প্ৰকাশ কৰিবলৈ আহ্বান জনায়। আন এগৰাকী কংগ্ৰেছী কৰ্মী জুৰি শৰ্মা বৰদলৈয়েও ২০১৮ চনৰ অক্টোবৰ মাহত প্ৰাগ নিউজৰ ‘সবিশেষ’ অনুষ্ঠানত (শান্তনু মহন্ত সৈতে হোৱা) আৰু DY 365 ৰ এটা সাক্ষাৎকাৰত মি-টু আন্দোলনৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়াইছিল। কোনো বিশেষ এজন ব্যক্তিৰ দ্বাৰা নিৰ্যাতিত নহ’লেও ৰাজনৈতিক জীৱনৰ বিভিন্ন সময়ত অসম আৰু অসমৰ বাহিৰতো এনে ইংগিতপূৰ্ণ দুই-এটা পৰিস্থিতিৰ সন্মুখীন হোৱা বুলি কৈছিল।

২০১৮ চনৰ ১৪ নৱেম্বৰত অসমৰ উদ্যোগী তথা সংৰক্ষণকৰ্মী নিশা বৰাই টুইটাৰ যোগে পদ্মভূষণ চিত্ৰশিল্পী যতীন দাসৰ বিৰুদ্ধে অভিযোগ আনিছিল। অভিযোগ মতে ২০০৪ চনতেই যতীন দাসৰ নিজা ছুডিঅ’ত নিশা বৰা যৌন উৎপীড়নৰ বলি হৈছিল। নিশা বৰাই যতীন দাসৰ এটা প্ৰকল্পত কাম কৰিবলৈ গৈছিল। দ্বিতীয় দিনা যতীন দাসে নিশা বৰাক জোৰকৈ সাবতি ধৰি ওঁঠত চুমা খাইছিল। বিগত ১৫ বছৰ ধৰি নিশা বৰাই নিজৰ মাজত সাঁচি ৰখা এই দুৰ্বিসহ অভিজ্ঞতাৰ কথা মি-টু আন্দোলনৰ মাজেৰে প্ৰকাশ কৰিছিল। মি-টু আন্দোলনে ভুক্তভোগী নাৰীৰ অন্তৰত সাহস আনি দিয়া বুলি এই আন্দোলনৰ প্ৰতি ইতিবাচক সঁহাৰিও এই প’ষ্টৰ যোগেৰে নিশা বৰাই প্ৰকাশ কৰিছিল।

অসমত মি-টু আন্দোলনৰ সময়ত বহু মহিলাই মুখ খুলিছিল যদিও কিবা এক সাহসৰ অভাৱত বা ভয়ত বহুতেই স্পষ্টকৈ কোনো নাম উল্লেখ নকৰাকৈয়ে নিজে সন্মুখীন হোৱা অবাঞ্ছিত পৰিস্থিতিৰ কথা বৰ্ণনা কৰি কৈছিল। অসমৰ মডেল সংগীতা দাস, ৰাজনীতি আৰু সাহিত্যৰ লগত জড়িত নম্ৰতা শৰ্মা, কণ্ঠশিল্পী-কংগ্ৰেছী নেত্ৰী ববিতা শৰ্মাই প্ৰাগ নিউজৰ ‘সবিশেষ’ অনুষ্ঠানত মি-টু আন্দোলনক পূৰ্ণ সমৰ্থন আগবঢ়াইছিল। তেওঁলোকে ইয়াত নিজ নিজ ক্ষেত্ৰত অপ্ৰীতিকৰ পৰিস্থিতিৰ সন্মুখীন হোৱা বুলি কৈছিল যদিও প্ৰত্যক্ষভাৱে কাৰো নাম উল্লেখ নকৰিলে। DY 365 ৰ সন্মুখত কণ্ঠশিল্পী হিয়া মেধি আৰু বৰষা বৰায়ো আনৰ পৰা অগ্নীল প্ৰলোভনভৰা ইংগিত পাইছিল বুলি প্ৰকাশ কৰিছিল যদিও নাম উল্লেখৰ পৰা বিৰত থাকে। অসমত মি-টু আন্দোলনৰ প্ৰভাৱত বহুতেই নিজৰ অবাঞ্ছিত অভিজ্ঞতাৰ কথা বৰ্ণনা কৰি গ’ল যদিও বহুতেই অভিযুক্তৰ নাম উল্লেখৰ পৰা বিৰত থাকিল। সেয়া আত্মসন্মান লাঘৱ হোৱাৰ ভয়তেই হওক বা আন কোনো শংকাতে হওক।

কৰ্মক্ষেত্ৰত মহিলাৰ যৌন নিৰ্যাতন প্ৰতিৰোধ সম্পৰ্কীয় বিল ২০১২ চনত লোকসভাত মনোনীত হোৱাৰ পাছত ২০১৩ চনত আইন হিচাপে গৃহীত হয়। ১৯৯৭ চনতে উচ্চতম ন্যায়ালয়ে ‘বিশাখা নিৰ্ণয়’ৰ আধাৰত কৰ্মক্ষেত্ৰত মহিলাৰ ওপৰত চলা যৌন উৎপীড়ন ৰোধ কৰাৰ নিৰ্ধাৰণ লৈছিল আৰু কৈছিল যে এইক্ষেত্ৰত মহিলা এগৰাকীয়ে প্ৰকাশ কৰা বক্তব্যকে গ্ৰাহ্য কৰা হ’ব। এনে আইন থকাৰ পাছতো অসমত কৰ্মক্ষেত্ৰত বহু মহিলা যৌন উৎপীড়নৰ বলি হৈ আছে। গুৱাহাটী বিশ্ববিদ্যালয় আৰু স্বেচ্ছাসেৱী অনুষ্ঠান ‘নৰ্থ ইষ্ট নেটৱৰ্ক’ৰ এক যৌথ সমীক্ষাত প্ৰকাশ পোৱা তথ্য অনুসৰি কৰ্মক্ষেত্ৰত যৌন নিৰ্যাতনৰ বলি হ’বলগা হয় অসমৰ ৪১ শতাংশ মহিলা। এই সম্পৰ্কত ২০১৮ চনৰ ৩ জুনত ‘আমাৰ অসম’ কাকতত এটা বাতৰি প্ৰকাশিত হৈছিল। বাতৰিটোৰ কিংদাংশ এনেধৰণৰ—“...প্ৰতিবেদনখনৰ মতে সহকৰ্মীৰ দ্বাৰা যৌন নিৰ্যাতনৰ বলি হোৱা মহিলা কৰ্মচাৰীসকলৰ ভিতৰত সৰ্বাধিক ৪৪.২ শতাংশই শাৰীৰিকভাৱে বিগৃহীত হয়। আনহাতে, ২৯ শতাংশ

মহিলা কৰ্মচাৰীয়ে মৌলিকভাৱে ২১.৫ শতাংশ মহিলা কৰ্মচাৰীয়ে মানসিকভাৱে আৰু ৫.৩ শতাংশ মহিলা কৰ্মচাৰী অন্যান্যধৰণে যৌন নিৰ্যাতনৰ চিকাৰ হয় পুৰুষ সহকৰ্মীৰ দ্বাৰা। আটাইতকৈ উদ্বেগজনক বিষয়টো হৈছে ১.৪১ শতাংশ মহিলাই কৰ্মক্ষেত্ৰতে পুৰুষ সহকৰ্মীয়ে শাৰীৰিক সম্পৰ্কৰ বাবে হেঁচা দিয়া বুলিও উল্লেখ কৰিছে। আনহাতে, শাৰীৰিকভাৱে সন্মুখীন হোৱা যৌন নিৰ্যাতনৰ ভিতৰত ৬৯.৩ শতাংশই অনাকাঙ্ক্ষিতভাৱে স্পৰ্শ কৰাৰ বিপৰীতে ৮.৮ শতাংশ মহিলাক পুৰুষ সহকৰ্মীয়ে ইচ্ছাকৃতভাৱে গা-হাঁহোৱা, সাবতি ধৰা, যৌন নিৰ্যাতন চলোৱা, যৌন নিগ্ৰহৰ চেষ্টা কৰা আৰু কোঠাৰ চুকলৈ ঠেলি দিয়া ইত্যাদি শাৰীৰিক নিৰ্যাতনৰ সন্মুখীন হোৱাসকলৰ ভিতৰত ৩৫.৭ শতাংশই যৌনগন্ধী মন্তব্যৰ সন্মুখীন হোৱাৰ বিপৰীতে ৩২.৭ শতাংশই পুৰুষ সহকৰ্মীৰ পৰা অশ্লীল অংগী-ভংগীৰ সন্মুখীন হৈছে। প্ৰতিবেদনখনৰ মতে মৌখিকভাৱে চলোৱা নিৰ্যাতনৰ ভিতৰত ৬৭ শতাংশই কৌতুক, ২৩ শতাংশই বাৰাণ্ডাত বিভিন্ন মন্তব্য আৰু ৯ শতাংশই ব্যক্তিগত বিষয়ক লৈ চৰ্চাৰ সন্মুখীন হোৱাৰ কথাও স্বীকাৰ কৰিছে। গুৱাহাটী, বৰপেটা, কোক্ৰাঝাৰ, তেজপুৰ, ডিব্ৰুগড়, ডিফু আৰু শিলচৰৰ বিভিন্ন চৰকাৰী-বেচৰকাৰী কাৰ্যালয়ক সামৰি চলোৱা সমীক্ষাটোত কৰ্মক্ষেত্ৰত মহিলাক 'যৌন নিৰ্যাতন প্ৰতিৰোধ আইন-২০১৩' সন্দৰ্ভত ৫১.৮ শতাংশ কৰ্মচাৰীৰে জ্ঞাত বুলি উল্লেখ কৰিলেও মাত্ৰ ৩৮.১ শতাংশ কৰ্মচাৰীয়েই আইনৰ প্ৰতি সচেতন বুলিহে প্ৰকাশ পাইছে। লক্ষণীয়ভাৱে ৬৮.৯ শতাংশ কাৰ্যালয়ত যৌন নিৰ্যাতন সন্দৰ্ভত অভিযোগ দাখিলৰ বাবে কোনো ব্যৱস্থা নাই। আনহাতে, মাত্ৰ ৯০ শতাংশ কাৰ্যালয়ত কৰ্মক্ষেত্ৰত মহিলাৰ যৌন নিৰ্যাতন প্ৰতিৰোধ আইনৰ সম্পৰ্কীয় নীতি-নিৰ্দেশনা মুকলিভাৱে দৃষ্টিগোচৰ কৰি ৰখাৰ ব্যৱস্থা নকৰে।^{১৭}

২০১৮ চনৰ আগষ্ট মাহত কেন্দ্ৰীয় মন্ত্ৰী ৰাজেন গোহাঁইৰ বিৰুদ্ধে যি যৌন নিৰ্যাতনৰ অভিযোগ উঠিছিল মি-টু আন্দোলনৰ ধুমুহাৰ মাজতে অক্টোবৰ মাহৰ শেষৰফালে এই ঘটনা আকৌ চৰ্চালৈ আহিছিল। নিৰ্যাতিতা মহিলাগৰাকীৰ স্বামীয়ে DY 365 ৰ আগত কোৱা অনুসৰি চাকৰিৰ প্ৰলোভনেৰে তেওঁ মহিলাগৰাকীৰ সৈতে যৌন সম্পৰ্ক স্থাপন কৰিছিল। এই সম্পৰ্কত নগাঁও আৰক্ষীক গোচৰ দিয়া হৈছিল যদিও ধনৰ বলেৰে সকলো সামৰি থোৱাৰ চেষ্টা কৰিছিল। ভুক্তভোগীৰ পৰিয়াল প্ৰলোভন আৰু ভাবুকিৰ সন্মুখীন হৈছিল। পাছত ৰাজেন গোহাঁয়ে তেওঁলোকৰ সৈতে যোগাযোগ নকৰাত আকৌ গোচৰ চলাবলৈ বিচৰা বুলি নিৰ্যাতিতা নাৰীগৰাকীৰ স্বামীয়ে সংবাদ মাধ্যমৰ আগত মুকলিকৈ প্ৰকাশ কৰিছিল। ৰাজেন গোহাঁইৰ এই ঘটনাক লৈ উচিত তদন্তৰ দাবী আৰু নাগৰিকত্ব সংশোধনী বিধেয়কৰ বিৰুদ্ধে দাবী উত্থাপন কৰাৰ ফলত দলৰ নীতি লৈ উচিত তদন্তৰ দাবী আৰু নাগৰিকত্ব সংশোধনী বিধেয়কৰ বিৰুদ্ধে দাবী উত্থাপন কৰাৰ ফলত দলৰ নীতি বিৰোধী স্থিতিত অৱস্থান কৰাৰ অপৰাধত মীৰা বৰঠাকুৰক বিজেপিৰ প্ৰাথমিক সদস্যৰ পৰা ২০১৮ চনৰ ছেপ্তেম্বৰ মাহত মাহৰ পহিলাতে বৰ্খাস্ত কৰা হৈছিল। সংবাদ মাধ্যমৰ আগত প্ৰসংগক্ৰমে তেওঁ উল্লেখ কৰে যে ভি. চন্দ্ৰশেখৰ আৰু ফণী শৰ্মাৰ পৰা তেওঁ নৈশ যাপনৰ প্ৰস্তাৱ পাইছিল। শাৰীৰিক আত্মসমৰ্পণ নকৰি প্ৰতিবাদ কৰাৰ বাবেই ষড়যন্ত্ৰমূলকভাৱে দলৰ পৰা বহিষ্কাৰ কৰা বুলি কৈছিল। মীৰা দাসে প্ৰায় চাৰি বছৰ আগতে 'প্ৰত্যাহ্বানৰ ৰাজনীতি' নামৰ যিখন কিতাপ লিখিছিল, ৰাজনীতিৰ বহু ভিতৰুৱা কথাই তাত তেওঁ মুকলিকৈ ব্যক্ত কৰিছিল। মি-টু আন্দোলনৰ আগতেই অসমত নাৰীৰ এনে সাহসিকতা অতি প্ৰশংসনীয়।

৩.১ অসমত মি-টু আন্দোলন সম্পৰ্কে বিভিন্নজনৰ মতামত : এক বিশ্লেষণ

অসমৰ প্ৰেক্ষাপটত মি-টু আন্দোলনৰ কথা বিশ্লেষণ কৰিবলৈ গ'লে দেখা যায় যে হলিউড বা বলিউডৰ

ক্ষেত্ৰখনৰ দৰে অসমত মি-টু আন্দোলন চিনেমা জগতখনৰ মাজেৰে প্ৰবেশ কৰা নাই। অসমত মি-টু আন্দোলন প্ৰবেশ ঘটিছিল সংবাদ মাধ্যম, ৰাজনীতি, প্ৰশাসন আদি ক্ষেত্ৰৰ মাজেৰে। অবশ্যে চিনেমা জগতৰ পৰা আৰম্ভ কৰি শিল্প, সাহিত্য, ৰাজনীতি আদি সকলো ক্ষেত্ৰৰ লোকে ইয়াৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়াইছিল। বাস্তৱিকভাৱে মি-টু আন্দোলনৰ বিভিন্ন দিশ বিশ্লেষণ কৰি বহু লেখকে সমালোচনামূলক প্ৰবন্ধ লিখিছিল। অন্যতম অভিনয় জগতৰ পৰা আৰম্ভ কৰি ৰাজনীতি, সংগীত, সাহিত্য আদি সকলো দিশৰ লোকেই মি-টু আন্দোলন প্ৰতি সমৰ্থন আগবঢ়াইছিল।

জনপ্ৰিয় অভিনেত্ৰী প্ৰজ্জ্বতি পৰাশৰে মি-টু আন্দোলনৰ প্ৰতি সমৰ্থন জনাই কৈছিল যে ই ভুক্তভোগী মহিলাসকলক ওলাই আহিবলৈ সাহস দিব। কিন্তু লক্ষ্য ৰখা প্ৰয়োজন যাতে মি-টুৰ নামত নিৰপৰাধী পুৰুষ শক্তি পাবলগীয়া নহয়। যুগিতৰা ভূঞায়ো মি-টুৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়ায়। এই দুয়োগৰাকী অভিনেত্ৰীয়ে লগতে কয় যে পূৰ্বতে তেওঁলোকো অল্লীল ইংগিত বা কথা-বতৰৰ মাজেৰে দুই-এটা এনে অভিজ্ঞতাৰ সন্মুখীন হৈছিল যদিও এইবোৰৰ দ্বাৰা তেওঁলোকৰ একো হানি-বিঘিনি হোৱা নাছিল।

সংগীতৰ জগতখনতো মি-টু আন্দোলনে আলোড়ন তুলিবলৈ সক্ষম হৈছিল। জনপ্ৰিয় কণ্ঠশিল্পী হিয়া মেধি আৰু বৰষা বৰাই মি-টু আন্দোলনৰ প্ৰতি সমৰ্থন আগবঢ়াই সকলো ভুক্তভোগী নাৰীক মাত মতিবলৈ আহ্বান জনাইছিল DY 365 ৰ এটা সাক্ষাৎকাৰত। সেই সময়তে নাম প্ৰকাশৰ বাবে অনিচ্ছুক মিৰ্জাৰ এগৰাকী গায়িকায়ো সহকৰ্মী বাদ্যযন্ত্ৰীৰ বিৰুদ্ধে যৌন অভিযোগ আনিছিল।

ৰাজনৈতিক ক্ষেত্ৰখনত ৰবিতা শৰ্মা, জুবী শৰ্মা ববদলৈ আদিয়ে মি-টুৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়ায়। প্ৰাক্তন মুখ্যমন্ত্ৰী তৰুণ গগৈয়েও মি-টু আন্দোলনৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়াইছিল। কংগ্ৰেছ বিধায়ক আপুল খালেকেও মি-টু আন্দোলনৰ প্ৰতি পূৰ্ণ সমৰ্থন আগবঢ়াই দলত অভিযোগ উত্থাপিত হোৱা নেতাৰ বিৰুদ্ধে বিহিত ব্যৱস্থা গ্ৰহণ কৰাৰ সপক্ষে মন্তব্য কৰিছিল। বিজেপি নেত্ৰী মীৰা বৰঠাকুৰেও মি-টু আন্দোলনৰ প্ৰতি সমৰ্থন আগবঢ়াইছিল। সমাজকৰ্মী সুমিত্ৰা হাজৰিকাই প্ৰাগ নিউজৰ 'সবিশেষ' অনুষ্ঠানত মি-টু আন্দোলনৰ প্ৰতি সমৰ্থন আগবঢ়াই সকলো নাৰীকে সাহসেৰে ওলাই আহিবলৈ আহ্বান জনাইছিল। তেওঁ লগতে কৈছিল যে যদি নাৰীসকলে নিজৰ সৈতে হোৱা নিৰ্যাতনৰ কথা প্ৰকাশ নকৰে বা অভিযুক্তৰ নাম উল্লেখৰ পৰা বিৰত থাকে, তেন্তে অসমত মি-টু আন্দোলন ফলপ্ৰসূ নহ'ব।

যি সময়ত মি-টুৰ ধুমুহাই সমগ্ৰ দেশক আলোড়িত কৰি তুলিছিল, সেই সময়তে অসম চৰকাৰে নাৰী সৰলীকৰণৰ বাবে এক অদ্ভুত ব্যৱস্থা লোৱাক লৈ ব্যস্ত হৈ পৰে। মি-টু আন্দোলনে সমগ্ৰ দেশত হেন্দোলনি তোলাৰ সময়তে অসম চৰকাৰে ১৮ বছৰৰ উৰ্ধৰ কন্যা সন্তানসকললৈ বিবাহৰ বাবে এতোলাকৈ সোণ আৰু উচ্চতৰ মাধ্যমিকত সূখ্যাতিৰে উদ্ভীৰ্ণ হোৱা ছত্ৰীলৈ একাখনকৈ মটৰ বাইকৰ যোগান ধৰাৰ কথা উত্থাপন কৰে। যিখন অসমত বছৰ বছৰ ধৰি নাৰী নিৰ্যাতিতা হৈ আছে; যিখন অসমত অধিকাংশ মহিলাই শিক্ষাৰ পোহৰ নোপোৱাকৈ আছে; বিদ্যালয়, মহাবিদ্যালয় আনকি বিশ্ববিদ্যালয়তো উপযুক্ত নাৰী শিক্ষাৰ পাঠ্যক্ৰমৰ ব্যৱস্থা কৰিব পৰা নাই—তেনে ক্ষেত্ৰত চৰকাৰৰ এই উত্থাপনক চৰম বহুৱালি বুলিয়ে ক'ব লাগিব।

অসমত মি-টু আন্দোলনক ৰাজনীতি, সাংস্কৃতিক, অভিনয় আদি দিশৰ লগত জড়িত বহুসংখ্যক লোকে সমৰ্থন কৰিলেও ছিৰিয়াছ সাহিত্যিক বা বুদ্ধিজীৱিসকলে এই সম্পৰ্কত বিশেষ মন্তব্য কৰা দেখা নগ'ল। অসমৰ বুদ্ধিজীৱি, সাহিত্যিকসকলে মি-টু আন্দোলনৰ সমৰ্থনত আছিল নে নাই, এই সম্পৰ্কে তেওঁলোক

সচেতন হৈছিল নে নাই তাক জনাৰো উপায় নাই। অৱশ্যে কবৰী ডেকা হাজৰিকা বা তেনে দুই-এগৰাকী লেখক-সাহিত্যিকে বাতৰি কাকতত দুই-এটা লিখনি প্ৰকাশ কৰিছিল।

অসমত মি-টু আন্দোলনৰ পৰৱৰ্তী সময়ত বৌদ্ধিক মহলক জোকাৰি যোৱা আটাইতকৈ ডাঙৰ ঘটনটো আছিল ডিব্ৰুগড় বিশ্ববিদ্যালয়ৰ পূৰ্বৰ অধ্যাপক ডম্বৰুধৰ নাথক মাজুলী সাংস্কৃতিক বিশ্ববিদ্যালয়ৰ উপাচাৰ্য হিচাপে নিযুক্তি দিয়াটো। কাৰণ ডম্বৰুধৰ নাথক বিৰুদ্ধে প্ৰমাণসহ (ফোনকলৰ ৰেকৰ্ডিং) কথা-বতৰাৰে হাৰাশাস্তি কৰা বুলি এগৰাকী ছাত্ৰীয়ে অভিযোগ আনিছিল। বিশ্ববিদ্যালয়ৰ কৰ্তৃপক্ষক লিখিত আবেদন দিও ন্যায় নোপোৱাত ছাত্ৰীগৰাকীৰ ন্যায়ৰ বাবে সংবাদ মাধ্যমত মুকলিকৈ সকলো কথা প্ৰকাশ কৰিছিল। এই ঘটনাৰ প্ৰতি বহুসংখ্যক আগশাৰীৰ লোকে মন্তব্য প্ৰকাশ কৰিছিল।

৪.০ সাহিত্যত মি-টু আন্দোলন :

নাৰীৰ প্ৰতি চলি অহা যৌন উৎপীড়ন-শোষণ আদিক লৈ দেশী-বিদেশী অনেক সাহিত্য ৰচিত হৈ আহিছে। বিভিন্ন দেশত, বিভিন্ন ভাষাত এনে বিষয়ক লৈ গল্প-উপন্যাস আদি ৰচিত হৈছে। কিন্তু এইবোৰ বিষয় সদায় সমস্যা হিচাপেই উত্থাপিত হৈছে বা কেতিয়াবা সমাধানসূত্ৰ আগবঢ়ালেও সি সাহিত্যৰ মাজতে সীমাবদ্ধ থাকিল। ছ'চিয়েল মিডিয়াৰ জড়িয়তে জনপ্ৰিয় হৈ উঠা মি-টু আন্দোলনে পোনপ্ৰথমবাৰৰ বাবে নাৰীৰ ন্যায় প্ৰাপ্তিৰ বাবে জনমত গঠন কৰাত সহায় কৰে। চলচ্চিত্ৰ, সংবাদ মাধ্যম, শিল্প-সংস্কৃতি আদি বিভিন্ন ক্ষেত্ৰক জোকাৰি তোলা মি-টু আন্দোলনে লিখকসকলৰ মন-মগজুতো প্ৰতিক্ৰিয়া সৃষ্টি কৰিবলৈ সক্ষম হয়। বিভিন্নজন লিখক-সাহিত্যিকে মি-টু সম্পৰ্কত কাকত-আলোচনীত প্ৰবন্ধ-পাতি লিখাৰ উপৰি গ্ৰন্থও ৰচনা কৰিছে।

উল্লেখযোগ্য যে লোৰি পাৰ্কিন্স (Lori Parkins) ৰ সম্পাদিত '#Me Too: Essays About How and Why This Happened, What it Means, and How to Make Sure it Never Happens Again' নামৰ গ্ৰন্থখনে ২০১৭ চনৰ (আমেৰিকাৰ) 'Independent Publisher's Book Awards' ৰ পৰা ব্ৰঞ্জৰ পদক পাবলৈ সক্ষম হৈছিল। কিতাপখনত বিখ্যাত লেখক, কাকত আদিৰ সম্পাদকৰ প্ৰবন্ধ, ভুক্তভোগী নাৰীৰ আত্মকথা আদি লিপিবদ্ধ কৰা হৈছে। গ্ৰন্থখনৰ পাতনিত লেখকে লিখিছে—"We know how this laissezfaire attitude towards sexual harassment happened. Now we have to change how we look at the behaviour, and make sure that there are consequences. Knowledge is power, and there is strength in numbers: #Me Too has shown us that. We have to tell the stories. ... We are not mob. We are a movement." মি-টু আন্দোলনৰ ফলত চুইডিছ একাডেমিয়ে সাময়িকভাৱে 'সাহিত্যৰ নোবেল পুৰস্কাৰ' স্থগিত ৰাখিবলৈ বাধ্য হৈছিল। কাৰণ সাহিত্যৰ নোবেল পুৰস্কাৰৰ বাবে যি কমিটি আছিল তেওঁলোকৰ কোনো কোনোৰ বিৰুদ্ধে যৌন নিৰ্যাতনৰ অভিযোগ উঠিছিল। ২০১৮ চনত হোৱা ঢাকা লিট ফেষ্টিৱ তৃতীয় দিনা দেশী-বিদেশী বিভিন্ন লেখকৰ মাজত মি-টু সম্পৰ্কে চৰ্চা হৈছিল—'ন' নোবেলঃ মি-টু ইন লিটাৰেচাৰ' শীৰ্ষক আলোচনাত। ব্ৰিটিছ ঔপন্যাসিক আৰু অধ্যাপক ফিলিপ হেনছাৰে এই আলোচনাত কৈছিল, "চুইডিছ একাডেমিৰ এই পদক্ষেপে তেওঁলোকৰ প্ৰতি দৃষ্টিভঙ্গীৰ পৰিৱৰ্তনত সহায় কৰিব। নোবেল পুৰস্কাৰ আৰু তেওঁলোকৰ কৰ্তৃপক্ষৰ ভৱিষ্যত

নিৰ্ভৰ কৰিছে এই আন্দোলনৰ ফলাফলৰ ওপৰত। আগতে বহুতেই কণ্ঠস্বৰ নুতুলিলেও এতিয়া সকলোৱে কণ্ঠস্বৰ তুলিছে। মই ব্যক্তিগতভাৱে নোবেল পুৰস্কাৰ বাতিলৰ সিদ্ধান্তক সমৰ্থন জনাইছোঁ।”^{৪৪} এই আলোচনাত মি-টু আন্দোলনৰ প্ৰতি সমৰ্থন জনাই ভাৰতীয় লেখক, সম্পাদক আৰু সমাজকৰ্মী হিমাঞ্জলি শংকৰে কৈছিল, “বিগত ১৫ বছৰ ধৰি সিমান পৰিৱৰ্তন দেখা নাছিলোঁ। কিন্তু বিগত কেইমাহমানৰপৰা এক ধৰণৰ সচেতনতা লক্ষ্য কৰা গৈছে। কেৱল নাৰীসকলৰ মাজতেই নহয়, পুৰুষসকলৰ মাজতো জনসচেতনতা লক্ষ্য কৰা গৈছে।”^{৪৫}

মি-টু আন্দোলনৰ জোৰাৰে প্ৰভাৱিত কৰা অন্য এক উল্লেখযোগ্য ক্ষেত্ৰ হ’ল ২০১৭ চনৰ আমেৰিকান পৰা প্ৰকাশিত ‘টাইম’ আলোচনী। ২০১৭ চনত ‘টাইম’ আলোচনীয়ে ‘Person of the year’ হিচাপে মি-টু আন্দোলনৰ সৈতে জড়িত নাৰীসকলক আখ্যা দিছিল। আলোচনীখনৰ প্ৰধান সম্পাদক এডৱাৰ্ড ফেলচেছালে এই নাৰীসকলক নীৰৱতা ভংগকাৰী (Silence Breakers) আখ্যা দিছিল। আলোচনীখনত মি-টু সম্পৰ্কে বহুল চৰ্চাই ঠাই পাইছিল। ২০১৭ চনৰ পৰা বৰ্তমান সময়লৈকে Marvin Fant ৰ ‘THE ME TOO MOVEMENT: THE FALL OF MEN RISE OF WOMEN; MIRIAM SAVED’ ৰ Me Too: Stories from the Australian movement; Mirande Valbrune ৰ Me Too: A practical guide to Navigating Today's cultural Workplace Revolution আদিকে ধৰি অনেক গুৰুত্বপূৰ্ণ গ্ৰন্থ প্ৰকাশ পাইছে।

ভাৰতবৰ্ষত মি-টু আন্দোলনে ২০১৮ চনৰ ছেপ্তেম্বৰ মাহত প্ৰভাৱ পেলাৱাৰ লগে লগে বিভিন্ন মহলত সৰ্বত্ৰ ইয়াৰ চৰ্চা হ’বলৈ দৰে। ‘India Today’, ‘Times of India’, ‘Voice of Youth’, ‘হৰিভূমি’ (হিন্দী), ‘নৱভাৰত টাইমছ’ (হিন্দী) আদি কাকতত মি-টু সম্পৰ্কত বাতৰি প্ৰকাশ পোৱাৰ উপৰি সচেতন মহলে প্ৰবন্ধ-পাতি লিখিছিল। ২০১৯ চনত প্ৰকাশ পোৱা আকাশ মাথুৰৰ ‘# মি-টু’ গ্ৰন্থখন বহুলভাৱে চৰ্চিত হৈছে। কিতাপখনৰ ‘সমৰ্পণ’ত তেওঁ অৰুণা শানবাগ নামৰ এগৰাকী মহিলাৰ কথা উল্লেখ কৰিছে, যি ৪২ বছৰ ধৰি নীৰৱে উৎপীড়নৰ বলি হৈ আছিল—“অৰুণা বাইদেউৰ ৪২ বছৰীয়া বেদনাদায়ক কাহিনী, মই বৰ্ণনা কৰিব নোৱাৰোঁ...।...এই কিতাপখন মই তেওঁৰ সেই বেদনাত অৰ্পণ কৰিছোঁ—যি তেওঁ সহি গ’ল, কিন্তু কেতিয়াও ক’ব নোৱাৰিলে...মি-টু।”^{৪৬} মি-টু আন্দোলনৰ প্ৰভাৱত ভাৰতীয় সাহিত্য বিশেষকৈ হিন্দী ভাষাত কাহিনী, গল্প, কবিতা আদি ৰচিত হৈছে। ২০১৮ চনত প্ৰকাশ পোৱা ড° সঞ্জীৱ কুমাৰৰ ‘# মে ভী’ এখন উল্লেখযোগ্য কাব্যপুথি। ৮০ টা কবিতায়ুক্ত এই কাব্যসংকলনখনৰ সাহিত্যিক গুণাগুণ লাগিলে যিয়েইক নহওক, মি-টু আন্দোলনকেন্দ্ৰিক ভাৰতীয় সাহিত্যৰাজিৰ ভিতৰত ই বিশেষ স্থান অধিকাৰ কৰি থাকিব। সংকলনটিত ‘আমুখ’ত কবিয়ে ৰামায়ণ-মহাভাৰতৰ যুগৰ পৰা নাৰীৰ ওপৰত চলি অহা অত্যাচাৰৰ কথা তুলি ধৰিছে। সেয়েহে ইয়াৰ ঐতিহাসিক মূল্য উলাইকৰিব পৰা নাযাব। ‘আমুখ’ত কবিয়ে লিখিছে—“ময়ো” শীৰ্ষকৰ মাধ্যমেৰে সকলোৰে ব্যথাক একেলগে প্ৰকাশ কৰাৰ চেষ্টা কৰা হৈছে। ইয়াৰ চিকাৰ কেৱল এক নহয়, অনেক মহিলা আৰু কেৱল মহিলাই নহয়, পুৰুষো—যাৰ ওপৰত এনেধৰণৰ অত্যাচাৰ হৈ আহিছে।”^{৪৭}

৫.০ মি-টু আন্দোলনৰ সফলতা-বিফলতা আৰু পৰিণতি :

ইমান কম সময়ৰ ভিতৰতে ইমান দ্ৰুত প্ৰসাৰতা লাভ কৰা নাৰী সজাগতামূলক আন্দোলন বিশ্বত

এয়ে প্ৰথম। ছ'চিয়েল মিডিয়াৰ জৰিয়তে গঢ় লৈ উঠাটোৱেই ইয়াৰ দ্ৰুত প্ৰসাৰৰ মূল কাৰণ। স্বীকাৰ কৰিব লাগিব যে মি-টু আন্দোলনে মহিলা-পুৰুষ সকলোকে সচেতন কৰি তুলিছিল। মি-টু এ বহু নাৰীৰ অন্তৰত সাহস যোগাইছিল, যাৰ বাবে বহু নাৰীয়ে অকপটে নিজৰ সৈতে হোৱা দুৰ্বিসহ অভিজ্ঞতাৰ কথা বৰ্ণনা কৰিছিল। বহু নাৰীয়ে ন্যায্য দূৰাৰদলিত থিয় দিবলৈ সক্ষম হৈছিল আৰু বহু অভিযুক্তই শাস্তিৰো সন্মুখীন হৈছিল। সমাজত নাৰীয়েই অধিক ভুক্তভোগী যদিও কোনো কোনো ক্ষেত্ৰত পুৰুষো নাৰীৰ দ্বাৰা নিৰ্যাতনৰ বলি হয়। ভাৰতীয় সমাজৰ পৰিপ্ৰেক্ষিতত এনেকুৱা ঘটনা প্ৰায় নঘটিলেও পাশ্চাত্যৰ সমাজ ব্যৱস্থাত দুই-এটা এনে ঘটনা লক্ষ্য কৰা যায়। কেলিফোৰ্ণিয়াৰ 'The Union Newspaper' কাকতৰ সম্পাদক ইভান নেটিভিডেড (Ivan Natividad) ৰ 'For Men the 'Me Too' movement should be More Than a Hastag' নামৰ প্ৰবন্ধটোত পোৱা তথ্য অনুসৰি—"According to the Rape, Abuse and Incest National Network, every 98 seconds someone in our country is sexually assaulted, and one out of every six women has been the victim of an attempted or completed rape in her lifetime. ...Moreover, 90 percent of adult rape victims are female, and females ages 16 to 19 are four times more likely than the general population to be victims of rape, attempted rape, or sexual assault." এয়া আমেৰিকা যুক্তৰাষ্ট্ৰৰ দৰে উন্নত দেশৰ তথ্য।

ভাৰতবৰ্ষৰ দৰে দেশৰ যৌন নিৰ্যাতন, বলাৎকাৰৰ ঘটনা প্ৰায় প্ৰতিদিনেই বাতৰি কাকত, টেলিভিছন চেনেল আদিত প্ৰকাশ পায়। NCRB (National Crime Records Bureau) ৰ ২০১৩ চনত প্ৰকাশ পোৱা এক তথ্য অনুসৰি ভাৰতত ২০১২ চনৰ ভিতৰতে ২৪, ৯২৩ টা বলাৎকাৰৰ ঘটনা সংঘটিত হৈছে আৰু ইয়াৰে ২৪,৪৭০ টা বলাৎকাৰ ভুক্তভোগীৰ পৰিচিত ব্যক্তিৰ দ্বাৰা সংঘটিত হৈছিল। চৰকাৰী তথ্যমতে অসমতো ২০১৬ চনৰপৰা ২০১৮ চনৰ পহিলালৈকে বলাৎকাৰৰ সংখ্যা আছিল ৩,০০৯ টা। কিন্তু ইয়াৰে ভিতৰত মাত্ৰ ১,৭৮৬ জন অপৰাধীকহে আৰক্ষীয়ে গ্ৰেপ্তাৰ কৰিবলৈ সক্ষম হৈছে।

মি-টু আন্দোলনৰ জোৱাৰে অধিকাংশ নাৰীক সাহস যোগাব পৰাটো ইয়াৰ সফলতা বুলিয়েই বুজিব লাগিব। মি-টু আন্দোলনৰ ফলতেই লুকাই থকা বহু ঘটনাও পোহৰলৈ আহিল। বিশেষকৈ কৰ্ম ক্ষেত্ৰত যৌন উৎপীড়নৰ বলি হৈ অহা বহু মহিলাই মুখ খুলিবলৈ সাহস কৰিলে। মহিলা আৰু শিশু কল্যাণ মন্ত্ৰালয়ৰ দ্বাৰা প্ৰকাশিত এক তথ্য অনুসৰি ভাৰতত কৰ্মক্ষেত্ৰত যৌন উৎপীড়নৰ সন্মুখীন হোৱা লোকে ৰুজু কৰা গোচৰৰ সংখ্যা ২০১৪ চনত আছিল ৩৭১ টা। এই সংখ্যা বৃদ্ধি পাই ২০১৭ চনত হয়গৈ ৫৭০ টা। উল্লেখযোগ্য যে ২০১৮ চনৰ প্ৰথম সাত মাহৰ ভিতৰতে দাখিল হোৱা অভিযোগৰ সংখ্যা হ'ল ৫৩৩ টা। ভাৰতলৈ তেতিয়াও মি-টু আন্দোলনৰ ঢৌ অহা নাছিল যদিও অন্যান্য দেশত মি-টু আন্দোলনে তেতিয়া যথেষ্ট প্ৰভাৱ পেলাইছিল।

মি-টু আন্দোলনে বহু প্ৰতিষ্ঠিত ব্যক্তিৰ মুখা খুলি দিলে। বিখ্যাত চলচ্চিত্ৰ প্ৰযোজক হাৰ্ভে ৰেইষ্টেইন, ফুটবল তাৰকা ৰণাল্ডো, ভাৰতৰ কেন্দ্ৰীয় মন্ত্ৰী জে. আকবৰ, নানা পাটেকাৰ আদিৰ দৰে অনেক প্ৰতিষ্ঠিত ব্যক্তিৰ বিৰুদ্ধে মি-টু আন্দোলনৰ জৰিয়তে অভিযোগ উঠিছিল। সামাজিক মাধ্যমৰ দ্বাৰা গঢ়ি উঠা এই আন্দোলনে জনমত গঠনত আটাইতকৈ শক্তিশালী ভূমিকা গ্ৰহণ কৰিছিল। কিন্তু পাশ্চাত্য আৰু ভাৰতৰ দৰে দেশৰ পৰিপ্ৰেক্ষিতত মি-টু আন্দোলনৰ কাৰ্যকাৰিতাৰ আৰু উদ্ভৱৰ ক্ষেত্ৰত আকাশ-পাতাল পাৰ্থক্য আছে। আমেৰিকাত

যি পৰিস্থিতিত মি-টু আন্দোলনৰ উদ্ভৱ হৈছিল, ভাৰতত তেনে কাৰণ যথেষ্ট আছিল যদিও ভাৰতত এনে আন্দোলনে স্বকীয়ভাৱে জন্ম লোৱা নাছিল। পাশ্চাত্যৰ পৰা ভাৰতলৈ এই আন্দোলনৰ আমদানি হৈছিল। পাশ্চাত্যত মহিলাসকলে (বিশেষকৈ কৃষাংগ মহিলাসকলে) কৰ্মক্ষেত্ৰতেই হওক বা ঘৰুৱাভাৱেই হওক যৌন নিৰ্যাতনৰ বলি হৈ আহিছিল। কিন্তু এনে প্ৰতিবাদী জোৰাৰ একেলগে আগতে উঠা নাছিল। যেতিয়াই ভুক্তভোগী নাৰীসকলে ছ'চিয়েল মিডিয়াৰ যোগেদি নিজৰ কাহিনী ব্যক্ত কৰিলে, তেতিয়াই এক সজাগতাৰ আবহাৱ হ'ল। কিন্তু ভাৰতৰ পৰিপ্ৰেক্ষিতত দেখা যায় যে—কৰ্মক্ষেত্ৰত বা আন কোনো ক্ষেত্ৰতেই হওক যৌন উৎপীড়ন বলি হোৱা নাৰীয়ে ভাৰতত অভিযোগ তোলাৰ ইতিহাস নতুন নহয়। বহু নাৰীয়ে এনে যৌন নিৰ্যাতনৰ বিৰুদ্ধে অভিযোগ তুলি আহিছে যদিও ন্যায়ৰ মুখ দেখিবলৈ প্ৰায় সংখ্যাকেই সক্ষম হোৱা নাই। ভাৰতত মি-টু আন্দোলন সম্পৰ্কে বিভিন্নজনৰ মাজত বাক-বিতণ্ডাও চলা দেখা গৈছিল। ভাৰতত যিগৰাকী চেলিব্ৰিটিয়ে মি-টু আন্দোলন আৰম্ভ কৰিছিল বুলি কোৱা হয়, সেই তনুশ্ৰী দত্তই সংবাদ মাধ্যমৰ আগত কৈছিল—“ভাৰতে পাশ্চাত্যৰ মি-টু আন্দোলনক অনুসৰণ কৰিছে। মি-টুৰ সফলতাৰ বাবে যি পৰিৱেশ লাগে সেই পৰিৱেশ ভাৰতে সৃষ্টি কৰিব পৰা নাই” লগতে তেওঁ সংবাদ মাধ্যমক কয় যে “মি-টু মই কৰা নাই, কৰিছে আপোনালোকে।”^{২২}

মি-টু আন্দোলনৰ ইতিবাচক দিশবোৰৰ লগতে নেতিবাচক দিশো আছে। এই সম্পৰ্কে বিভিন্নজনে ভিন ভিন মতামত আগবঢ়াইছে। বহুতৰ মতে জনপ্ৰিয়তা লাভৰ বাবেই তনুশ্ৰী দত্ত আদি চেলিব্ৰিটিয়ে এনে অভিযোগ উত্থাপন কৰিছে। মি-টু আন্দোলন আন এক দুৰ্বলতা হ'ল—ব্যক্তিগত ঈৰ্ষা বা প্ৰতিশোধ পৰায়ণতাৰ বশবৰ্তী হৈও কোনো নাৰীয়ে নিৰপৰাধী পুৰুষৰ প্ৰতি মিচা অভিযোগ আনিব পাৰে। আনহাতে ছ'চিয়েল মিডিয়াৰ যোগেদি সাধাৰণ নাৰীয়ে নিজৰ নাম আৰু ভুক্তভোগী অভিজ্ঞতা ব্যক্ত কৰিবলৈ সাহস কৰিব বুলি এশ শতাংশ আশা কৰিব নোৱাৰি। কাৰণ সাধাৰণ নাৰীয়ে এনে কৰিলে নিৰাপত্তাহীনতাত ভোগাৰ আশংকা থাকে। তাৰোপৰি আত্মসন্মান লাঘৱ হোৱাৰ ফলত সমাজত হয় হোৱাৰ ভয়ো সাধাৰণ নাৰীৰ থাকে। ভাৰতৰ দৰে উন্নয়নশীল দেশৰ বহু অনগ্ৰসৰ ঠাইৰ নাৰী আজিও চাৰিবেৰৰ মাজতেই আবদ্ধ। নিজৰ কাহিনী ব্যক্ত কৰি বা কাৰোবাক অভিযুক্ত কৰি ছ'চিয়েল মিডিয়াত জনমত গঠন কৰিবলৈ তেওঁলোক অক্ষম। আনহাতে ভাৰতবৰ্ষৰ শিক্ষিত হাৰ (২০১১ চনৰ লোকপিয়ল অনুসৰি) ৭৪.০৪ শতাংশ। ইয়াৰ ভিতৰত পুৰুষৰ শতকৰা হাৰ ৮০.৯ শতাংশ মহিলাৰ শতকৰা হাৰ ৬৪.৬০ শতাংশ। এনেক্ষেত্ৰত অশিক্ষিত মহিলাই সামাজিক মাধ্যমৰ দ্বাৰা এনেবোৰ অভিযোগ প্ৰকাশ কৰাটো অসম্ভৱ হৈ পৰে।

অসমৰ পৰিপ্ৰেক্ষিতত দেখা গ'ল—মি-টু আন্দোলনৰ ধুমুহাৰ মাজতে ভুক্তভোগী বহু মহিলাই নিজৰ সৈতে হোৱা যৌন উৎপীড়নৰ কথা ব্যক্ত কৰি গ'ল যদিও অভিযুক্তৰ নাম অতি কম সংখ্যক মহিলাইহে প্ৰকাশ কৰিছে। অধিকাংশ মহিলাই অভিযুক্তৰ নাম প্ৰকাশ কৰাৰ পৰা বিৰত থাকিল। গতিকে অসমত মি-টু আন্দোলনে বিশেষ সফলতা লাভ কৰিলে বুলিব নোৱাৰি। ভাৰত তথা অসমত মি-টু আন্দোলনৰ কথা ক'বলৈ গৈ ২০১৮ চনতে কৰবী ডেকা হাজৰিকাই কাকতৰ এটা প্ৰবন্ধত লিখিছিল—“দেখা গৈছে যে ঘাইকৈ খ্যাতিমান আৰু ক্ষমতাসালীসকলৰ প্ৰতিহে এই আন্দোলনে ভাবুকিৰ সৃষ্টি কৰিছে। আনহাতে, চুকে-কোণে-ঘৰে-দুৱাৰে-পৰিজন-বন্ধুৰ মাজত লুকাই থকা পুৰুষসকলৰ গাত আঁচোৰেই পৰা নাই। তদুপৰি প্ৰতিবাদ কৰোঁতাসকল হ'ল সামাজিকভাৱে প্ৰতিষ্ঠিত আৰু শক্তিশালী পৃষ্ঠভূমি থকা মহিলা। আমাৰ ভদৰী, তগৰ, কপাহীহঁত ইয়াৰ পৰা দূৰত। আমাৰ সমাজৰ উদাৰতা নাই আৰু আৰু পৰিয়ালৰো বল নাই। লগতে নাই নাৰীক সং সাহস

যোগাৰ পৰা পৰিৱেশ। এই সকলো মিলি শাৰীৰিক-মানসিক নিৰ্যাতনৰ বলি হোৱা ভাৰতীয় নাৰীয়ে আজিও সম্পূৰ্ণকৈ প্ৰতিবাদৰ ভাষা শিকা নাই।”

তথাপি মি-টু আন্দোলনে কৰ্মক্ষেত্ৰত যৌন উৎপীড়নৰ বলি হোৱা মহিলাৰ সমস্যাক গোলকীয় সমস্যা হিচাপে তুলি ধৰিলে। নিঃসন্দেহে এই শতিকাত ঘটা উল্লেখযোগ্য পৰিৱৰ্তন তথা ঘটনাসমূহৰ ভিতৰত মি-টু আন্দোলনেও বিশেষ স্থান অধিকাৰ কৰিব। এশ শতাংশ মহিলা ইয়াৰ পৰা সম্পূৰ্ণ মুক্ত হ'ব নোৱাৰিলেও ৪০-৫০ শতাংশ মহিলাই নিজকে মুক্ত কৰিব পৰাকৈ, প্ৰতিবাদ তুলিব পৰাকৈ অন্তৰত সাহস গোটাৰ পাৰিছে। বৰ্তমান সময়ত এনে উৎপীড়ন চলোৱাৰ আগতে এজন পুৰুষে হাজাৰৰাৰ ভাবিব লগা হ'ব। মহিলাৰ লগতে পুৰুষৰ মাজলৈ আনি দিয়া সচেতনতা সচেতনতা, সতৰ্কতাই মি-টু আন্দোলনৰ বিশেষ সফলতা।

উপসংহাৰ :

সামাজিক মাধ্যমৰ জৰিয়তে অতি কম সময়ৰ ভিতৰতে প্ৰবলভাৱে গঢ় লৈ উঠা মি-টু আন্দোলনে আমেৰিকাকে ধৰি বিশ্বৰ বহু দেশক আলোড়িত কৰি গৈছিল। এই সম্পৰ্কে অধ্যয়ন তথা বিচাৰ-বিশ্লেষণৰ যথেষ্ট অৱকাশ আছে। সীমিত সময় আৰু সীমিত পৰিসৰৰ মাজত আবদ্ধ থাকিবলগীয়া হোৱাৰ বাবে বিষয়টোৰ পুংখানুপুংখ আলোচনা আৰু বিশ্লেষণৰ বিপৰীতে সামগ্ৰিক অৱলোকন কৰি কিছুমান সিদ্ধান্তত উপনীত হ'ব পৰা গ'ল—

- (১) মি-টু আন্দোলনৰ এক দীঘলীয়া ইতিহাস আছে। এইসম্পৰ্কে বিস্তৃত পৰিসৰত অধ্যয়ন কৰিব পৰা যাব। এই ক্ষুদ্ৰ গৱেষণা পত্ৰখনক ইয়াৰ এক সামগ্ৰিক ইতিহাস বুলি ধৰা হৈছে।
- (২) মি-টু আন্দোলনে অন্যাৰ্যৰ বিৰুদ্ধে জনমত গঠনত সহায় কৰিছিল।
- (৩) মি-টু আন্দোলনে সমগ্ৰ নাৰীজাতিক মুক্তি দিব নোৱাৰিলেও একাংশ নাৰীৰ ন্যায্য প্ৰাপ্তিৰ বাবে সাহসৰ পথ হৈ পৰিল।
- (৪) মি-টু আন্দোলন সম্পৰ্কত অনেক সাহিত্য সৃষ্টি হৈছে। এই বিষয়ত অধিক গৱেষণাৰ থল আছে। এই ক্ষুদ্ৰ গৱেষণা পত্ৰত দুই-এক উল্লিখনসহ সামগ্ৰিক বিশ্লেষণহে কৰা হৈছে।
- (৫) মি-টু আন্দোলনৰ সফলতাৰ সমান্তৰালকৈ বিফলতা বা সীমাবদ্ধতা থাকিলেও ই সমাজত আলোড়ন তুলি যোৱা এক নাৰীবাদী আন্দোলন।

প্ৰসংগ সূত্ৰ :

^১ From nytimes.com (The New York Times : Sandra E. Garcia)

^২ <http://vritty.com/video/tarana-burke-metoo-poweful men/>

^৩ <http://www.nbcnews.com/news/us-news/year-ago-alyssa-milano-started-conversation-about-metoo->

^৪ <https://www.bbc.com/bengali/news-45246349>

^৫ Remebering Patricia Douglas, the first Woman to call out Hollywood for sexual Assault—Raechal Leone Shewfelt)

* <http://youtu.be/ejhomF-OqvA>, <http://youtu.be/1f707Etpkey>

° আমাৰ অসম, ৩ জুন, ২০১৮

° সাহিত্যে 'মি-টু' আন্দোলনেৰে প্ৰভাৱ www.banglatribune.com

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° আমুখ (মে ভী, ড° সঞ্জীৱ কুমাৰ)

° <http://youtu.be/Uzh1mc88D4>

গ্ৰন্থপঞ্জী :

ইংৰাজী গ্ৰন্থ:

1. Perkins, Lori: *ME TOO: Essays about How and Why This Happened, What it Means, and How to make Sure it Never Happens Again*, Publisher: Riverdale Avenue Books, publication Date: 3 November, 2017

2. Leser, David : *Me Too movement—The #Me Too Story*

হিন্দী গ্ৰন্থ:

১. কুমাৰ, সঞ্জীৱ : # মে ভী, ইণ্ডিয়া নেটবুক, ২০১৮

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(২) Marvelousnews.com, dw.com, amarujala.com, priyo.com, niyomiabarta.com, usatoday.com, varity.com, indiatoday.in, nbcnews.com, globaltvbd.com, nabhanattimes, swadhinbarta.com, bbc.com, sarbabangla.com, sbs.com, prothomalo.com, ganadabi.com, banglatribune.com, xukh-dukha আদি বিভিন্ন সংবাদ মাধ্যমৰ ৱেবছাইটত প্ৰচাৰিত বাতৰি আৰু প্ৰবন্ধ।

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The Wretched of the Dickens: Deconstructing race-relations in Paul Beatty's *The Sellout*

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Abstract: *The construction of the idea of a race and racial prejudice has long been seen as detrimental to a progressive society. Racial stereotyping and domination of “inferior race” within the matrix of racial classification have led to violent atrocities around the world. In recent times the protest campaign #BlackLivesMatter after the killing of George Floyd in the USA once again brought to fore how structural discrimination can exist in a society which was founded on the ideals of Equality, Justice and Fraternity. Floyd’s lynching was not an isolated incident in the history of America, as there have been regular occurrences and practice of racial discrimination in the most advanced societies. Whereas social activists continue to protest against such atrocities, the creative writers are also registering their protest through literary works. Paul Beatty’s fiction *The Sellout* has addressed this racial issue very conspicuously through the use of satire, irony and dark humour. This paper aims to read this novel within the theoretical framework of “Critical Race Theory” to argue that the so-called legal social agencies which promise to ensure justice to one and all are in fact hegemonic entities controlled by white-supremacist capitalist forces. The paper examines this thesis by bringing in incidents depicted in the novel alongside the socio-historical episodes of racial discrimination as recorded in other literary and critical works.*

Keywords: *Critical Race Theory, Black Lives Matter, Racial Discrimination, The Sellout, Slavery.*

The Sellout is Paul Beatty's fourth novel that deals with the issues of racial inequality in terms of economy, social privilege and position. The judges of the Booker Prize award committee rightly dubbed it "a novel for our times" (Meier 2016). In one of his interviews Paul Beatty has refused to acknowledge his fictional work *The Sellout* as a satire because he believes that it may belittle the seriousness of what he actually wants to address (Tripathi 2017). He rather treats the text as a 'counterpoint' to the racial *bête noire* that has enveloped most of the political world for quite some time now. Beatty acknowledges that the novel maintains the tone and language one finds in most of his other works; however those have not been considered as satire yet (Tripathi 2017). In spite of his disavowal to brand it as a satire, most reviews around the world have labelled *The Sellout* as one. This is perhaps because the term has a wider connotation and may subsume the seriousness of the author's intent and furthermore his eloquence and style have also been considered to be at par with the satire and realism that permeate the works of Jonathan Swift and Mark Twain respectively (Russell 2016; McMurtrie 2015). Indeed the satire is so pungent that it can hardly escape being noticed. The self-inflicting humour in the novel exudes from the lived experience of racial discrimination and segregation that haunts the lives of the racial 'other' in American society. Therefore the invective humour is dipped in the poignant and painful experience of being a non-white in an all-white world. This white/black binary has been repeatedly used as a trope throughout the novel to show the persisting agony and frustration that belie the smoke wall of the American Dream.

Beatty is not the first black author to have shared the experience of racial discrimination through fictional work. However his approach is quite distinct from his predecessors in many ways. The early African-American writers like Olaudah Equiano, William Wells Brown, Frederick Douglass, Sojourner Truth, Solomon Northup and many more shared their experience of slavery either through autobiographical works or through fictional narratives in the early nineteenth century America. These works were marked by a tone of anguish, simplicity, helplessness and pathos in the backdrop of slavery and American Civil War. The twentieth century writers like Alice Walker, W.E.B. Du Bois, Zora Neale Hurston, Ralph Ellison, James Baldwin and Richard Wright continued the tradition of narrating the inter and intra-racial experience of the African-Americans through their polished fictional narratives and non-fictional works. These later writers are acclaimed for their experiment with narrative technique, technical acumen, narrative skill and undaunted voice against racial oppression. Beatty's work is a rich addition to this vast gamut of literary tradition that exposes the centuries of atrocities committed against the coloured people in the United States of America. Beatty's stark realism and blunt exposure of the predominating structures of racial discrimination in American society are unequivocally lauded by critics and peers alike. Beatty exposes the hypocrisy of white racist Americans that seek to promote the Western Anglo-Saxon Protestant hegemony (WASP) and calls a lie a lie to the racist right-wing forces who think America is only for the whites. Bonbon, the protagonist,

sarcastically explains that Obama's ascendancy into the position of the president twice does not mean anything nor does it prove the eradication of racial feelings- "And like the black president, you would think that after two terms of looking at a dude in a suit deliver the State of the Union address, you'd get used to square watermelons, but somehow you never do" (Beatty 2016, 63). In fact Obama's choice of racial identity in census as 'black' became the matter of much criticism where his detractors accused him of disowning his white mother (Citrin et. al. 2014). It was believed that Obama's win is a defeat of racism in America. However, Beatty was critical of such an opinion and by the time Obama's term was over, Beatty was done with his novel that let the cat out of the bag.

In the recent times when hate crimes had resurged with the coming of Trump into power, Beatty's work can help us to rethink the deep-rooted psyche of racial prejudice and discrimination that prevail in the American society. After the cold-blooded murder of George Floyd (Philimon 2020), many more videos of racial atrocities (Evelyn 2020) and human rights violation against the Blacks have resurfaced that call into question the very foundation of Equality, Liberty and Justice in American society. It is within this rubric of Critical Race Theory (CRT) that Paul Beatty's *The Sellout* can be read as a response to the social anathema of racial discrimination. Critical Race Theory is an emerging field of inquiry that investigates the lopsided inter-racial relationship wherein the 'subtler forms of racism' are examined critically (Delgado & Stefancic 2016, 4). To quote Delgado and Stefancic, "critical race theory questions the very foundations of liberal order, including equality theory, legal reasoning, Enlightenment rationalism, and neutral principles of constitutional law" (Delgado & Stefancic 2016, 3). Precisely the racial discrimination that is embedded in the American society is being denuded by Paul Beatty in his novel. The narrator in this regard states,

I didn't always feel this way. Growing up I used to think all of black America's problems could be solved if only we had a motto. A pithy Liberte, egalite, fraternite we could post over squeaky wrought-iron gateways, embroider onto kitchen wall hangings and ceremonial bunting. (Beatty 2016, 10)

It is this illusion which the narrator busts throughout the narrative by exposing the hypocrisy and structural discrimination in the American society. The novel starts with a prologue where the narrator/protagonist (Bonbon) informs us about his present plight of being indicted for slave owning and segregation. The 'black Judge' inquires of him, "how it is that in this day and age a black man can violate the hallowed principles of the Thirteenth Amendment by owning a slave" and how could he "wilfully ignore the Fourteenth Amendment and argue that sometimes segregation brings people together" (Beatty 2016, 23). In principle although these amendments were introduced in nineteenth century to ensure abolition of slavery and right to life, liberty and property of all US citizens, nevertheless structural discrimination and segregation in various forms continues to persist. This discrimination, in the past, had been promoted by political

intellectuals who argued that the Africans are racially inferior to the whites according to the hierarchical paradigm of *scala naturae* (Wade 2020). The following excerpt elicits more information on the construction of race identity in America:

Although legal slavery in the United States ended in 1865 with the passage of the Thirteenth Amendment to the Constitution, the ideology of race continued as a new and major form of social differentiation in both American and British society. The Black codes of the 1860s and the Jim Crow laws of the 1890s were passed in the United States to legitimate the social philosophy of racism. More laws were enacted to prevent intermarriage and intermating, and the segregation of public facilities was established by law, especially in the South. The country's low-paying, dirty, and demeaning jobs were relegated to "the Negro," as he was seen fit for only such tasks. Supreme Court decisions, such as the Dred Scott case of 1857, made clear that Negroes were not and could not be citizens of the United States. They were to be excluded from the social community of whites but not from the production of their wealth. The Supreme Court decision in Plessy v. Ferguson (1896), which permitted "separate but equal" facilities, guaranteed that the racial worldview, with its elements of separateness and exaggerated difference, would continue to flourish. (Wade 2020)

Therefore the discrimination and subjugation of the Blacks, which was stark and overt prior to the amendment, became embedded into the racial consciousness of the whites which fanned racism in covert ways. Beatty's contention is to expose the hypocrisy of American society that promotes "rhetoric over reality" (Beatty 2016, 22). Through his narrator, Beatty attempts to call off the bluff about equality and justice as Delgado and Stefancic point out with relation to Critical Race Theory that, "most would agree that our system of white-over-colour ascendancy serves important purposes, both psychic and material, for dominant groups" (Delgado & Stefancic 2016, 7). Therefore the equality which the American Constitution seeks to promote overlooks the historical wrongs and its practical consequences that already have unequal citizens. How far the rights of the coloured people are protected and privileged is a matter of question even today when protesters have to come to streets to remind us that 'black lives matter'. Critical Race Theory employs a phrase- "interest convergence" (ibid 8) -to point a new dimension where sometimes the "triumph of civil rights litigation" is actually the by-product of the "self-interest of elite whites" rather than the actual desire to help the black. This is why the narrator in *The Sellout* mockingly disparages the belief of the black Judge:

He wants to believe that Shakespeare wrote all those books, that Lincoln fought the Civil War to free the slaves and the United States fought World War II to rescue the Jews and keep the world safe for democracy, that Jesus and the double feature are coming back. (Beatty 2016, 23)

A section of Blacks, like the judge and narrator's father (A social scientist and a negro-whisperer), seem to be living in a make-believe world where theories are propounded to validate human action and not vice-versa. In the same context one can understand America's engagement in Vietnam, Korea, Iraq or Afghanistan. The frontiers of American imperialism and capitalist order are now being pushed and promoted by successive American governments under the camouflaged identity of being a world saviour. One finds that the name of the city of Dickens in the outskirts of Los Angeles, a once segregated area for Blacks, started disappearing in a non-segregated America suddenly. The narrator does not ascribe this erasure of name as a pro-black measure, but as the consequence of the interest of the rising class of affluent Americans:

It was a part of a blatant conspiracy by the surrounding, increasingly affluent, two-car-garage communities to keep their property values up and blood pressure down. When the housing boom hit in the early part of the century, many moderate-income neighbourhoods in Los Angeles County underwent real Estate makeovers. (Beatty 2016, 57)

The reason behind the disappearance of the name of Dickens is not apparent; however the ghetto had been infamous for high crime rates and segregated population, affecting the property rates of nearby areas. Therefore the disappearance of the name does not mean the disappearance of the community or the removal of segregation. The disappearance of the infamous city has more to do with the capitalist agenda than any philanthropic mission. The narrator therefore decides to reinstate the name in the city map and reclaim the identity of the ghettoised black Dickensians. Moreover he also accepts the indenture of another black named Hominy Jenkins, who feels grateful to the former for saving his life (ibid 74). It is through Hominy the novelist ironically recreates the centuries of atrocities that have subjugated the blacks to passive submission and acceptance of their fate. Hominy is portrayed as a representative of those racial stereotypes who are considered to be happy and content in their servitude towards their "massa"(Master)- a lingering image that is used to reinstate that America cannot blanket their past sins of racial atrocities. As a child artist Hominy acted in the *Little Rascal* that went on to become a successful but highly controversial series because of racial stereotype projections. And since Dickens disappeared, Hominy feels that his identity has lost as well- "“Why, massa? Because when Dickens disappeared, I disappeared. I don't get fan mail anymore”"

(ibid 77) If we analyse this through the lens of Critical Race Theory, we will see that the “social construction” thesis explains the projection of racial stereotypes in media and literature as a mechanism to subjugate a community (Baker 1970). It states that “race and races are products of social thought and relations. Not objective, inherent, or fixed, they correspond to no biological or genetic reality; rather races are categories that society invents, manipulates, or retires when convenient” (Delgado & Stefancic 2016, 8). The centuries of civilizing mission leading to subjugation and deprivation that the blacks have suffered owing to the social construction of the Africans as a barbaric and inferior race in the literary or historical works are components of the Imperial policy for colonisation that has been justified as “white man’s burden.” The novelist parodies this entire mechanism by constructing the relationship between the narrator and his father who is a “social scientist of some renown” (Beatty 2016, 27). The narrator explains his plight and relation with his father:

And in his quest to unlock the mental freedom, I was his Anna Freud, his little case study, and when he wasn’t teaching me how to ride, he was replicating famous social science experiments with me as both the control and the experimental group. Like any “primitive” Negro child lucky enough to reach the formal operational stage, I have come to realize that I had a shitty upbringing that I will never be able to live down. (ibid 28-29)

Bonbon’s father seems to have applied all possible experiments to test some hypothesis determining the racial character of different Blacks. After experimenting with “bystander effect”, “bandwagon effect”, “Servility and Obedience in the Hip-hop generation” test, and similar experiments we find him burning “his ‘findings’ in the fireplace” (ibid 35). The narrator then concludes by stating that they all are the products of their environment which is the novelist’s counterpoint of racial stereotyping and social construction of race identities. Therefore the construction of the racial attributes of the non-whites by the white anthropologists in the early phase of colonisation of Africa is a pre-deterministic racial prejudice constituting biological racism.

The narrator also exposes the various forms of racial prejudices that exist in America. The novelist also takes a dig at the coloured people who are equally hypocritical and cherish the elusive American Dream of owning a luxury house and a car even if they are bankrupt-

By day wereniggers are erudite and urbane, but with every lunar cycle, fiscal quarter, and tenure review their hackles rise, and they slip into their floor-length fur coats and mink stoles, grow fangs, and schlep down from their ivory towers and corporate boardrooms to prowl the inner cities, so that they can howl at the full moon over drinks and mediocre blues music.(ibid 96)

This “wereniggers” share the same view like their white counterparts. Bonbon’s fascination for the famous American snack “Oreo” is symbolically used to present this idea. Christopher Baker writes:

Throughout a meeting of the “Dum Dum Donuts Intellectuals”, Bonbon is seen snacking on “America’s favorite cookie” —the Oreo (Beatty 96–98, 100). The term “Oreo” has a history dating back to the 1960’s; used to describe individuals who, while being Black on the outside, are seen as carrying a desire to be White or be complicit to White whims, inside. (Baker 2019)

Such internalisation shows the powerful effect of racism in American society where the Blacks suffer a duality wherein he/she distances the self from the projected “other.” Homi Bhabha cites from Fanon’s *Black Skin, White Masks* an interesting episode in this relation. He points out an occasion when a black child says: “Look, a Negro...Mama, see the Negro! I’m frightened.” (Bhabha 1994, 108) Bhabha explains this internalisation

The girl’s gaze returns to her mother in the recognition and disavowal of the Negroid type; the black child turns away from himself, his race, in his total identification with the positivity of whiteness which is at once colour and no colour. In the act of disavowal and fixation the colonial subject is returned to narcissism of the imaginary and its identification of an ideal ego that is white and whole. (ibid 109)

Such disposition is the result of continuous stereotypes that had been created by the colonisers once upon a time. Beatty then takes a dig at the various representations of the African-Americans in the literary and creative works. Therefore at the very outset the protagonist challenges the stereotype in ambivalent terms. He begins by saying

This may be hard to believe, coming from a blackman, but I have never stolen anything. Never cheated on my taxes or at cards. Never snuck into movies or failed to give back the extra change to a drugstore cashier indifferent to the ways of mercantilism and minimum-wage expectation. I’ve never burgled a house. Held up a liquor store. (Beatty 2016, 3)

These relates to the stereotype portrayal of the non-whites in television soaps and Hollywood movies where the Blacks are depicted in a negative image. Such portrayal is not only distorting but is also humiliating, for instance in a particular episode of *Our Gang* a black child character is shown as sweating black ink (Oyola 2019). In matter of jobs too one finds that the blacks are highly discriminated and are thought to be best suited for low-paying works, manual works and subservient positions. The black community is not just geographically segregated; the segregation

also exists in public transport and public space. Understanding the impact of social segregation, subjugation and slavery in the African continent, Fanon writes in *The Wretched of the Earth* about the overarching effect of colonial impact on the psychology of the Black communities in post-colonial African nation. By extension of that understanding one can also gauge the psychological effect of slavery on the African-Americans articulated through the character of Hominy. Although a problematised cultural identity is seen on the horizon when the Black Americans are compared to the Africans, what draws these two geographically separated communities together is their treatment by the whites (Fanon 2001, 73-74). Being a resident of Dickens, Hominy becomes the wretched of Dickens, a metaphor, whose identity is constructed and controlled by the policy of White-Americans. It is indeed a matter of irony that Bonbon is indicted for promoting slavery and segregation, whereas more subtle forms of bonded labourer and segregation are stealthily practiced in the USA through national policies backed by corporate houses. The novelist critiques these anomalies in the American society in a scathing manner throughout the novel. Scott Astrada in this context writes

As postcolonial notions of race and history gain ground in a variety of discourses, there is an evolving recognition of how subjects become aware of their own history, both passively and subjectively, as they navigate a world moving rapidly toward a globalized history and political economy yet still powered by colonial notions of race, power, and politics. (Astrada 2017)

The novel gives us a clear picture of the race relations in the American society and the hypocrisy that exists in the communities. The work is deeply entrenched in the race-relations between the whites and non-whites (Black, Yellow, Coloured, and Brown). The novel offers a scope to understand the dynamics of race relationships where a particular class of people occupy power positions through hegemonic manoeuvring of identity. Although the novel abounds in metaphors and references which are entrenched in American culture, it can still be extended to understand the racial discriminations and its manner of operation in different parts of the world. The numerous references to literary works, Hollywood films, political facts and history of the world not only makes it a challenging read but also highlights the extraordinary calibre of the novelist who has woven the various strands of his genius to write this novel. To conclude with Beatty's words, "It was a hard book for me to write; I know it's hard to read. I'm just trying to create space for myself. And hopefully that can create space for others" (Meier 2016).♦♦

References:

- Astrada, Scott (2017). "Home and Dwelling: Re-Examining Race and Identity through Octavia Butler's *Kindred* and Paul Beatty's *The Sellout*." *Journal of French and Francophone Philosophy - Revue de la philosophie française et de langue française*, Vol . XXV, No 1, 105-120. DOI 10.5195/jffp.2017.816

- Baker, Christopher (2019). "You Are What You Eat: Connecting Food with Identity in Paul Beatty's *The Sellout*." *The Explicator*, 77:3-4, 128-131, DOI: 10.1080/00144940.2019.1668341
- Baker, W (1970). "William Wilberforce on the Idea of Negro Inferiority." *Journal of the History of Ideas*, 31(3), 433-440. doi:10.2307/2708515
- Beatty, Paul. (2016). *The Sellout*. United Kingdom: One World.
- Bhabha, Homi. (1994). *The Location of Culture*. Oxon: Routledge.
- Citrin, J., Levy, M., & Van Houweling, R. (2014). "Americans Fill Out President Obama's Census Form: What is His Race?" *Social Science Quarterly*, 95(4), 1121-1136. Retrieved January 4, 2021, from <http://www.jstor.org/stable/44072737>
- Delgado, Richard & Jean Stefancic. (2016) *Critical Race Theory: An Introduction*. New Delhi: Dev Publishers and Distributors, p. 4.
- Evelyn, Kenya. (2020). "Hateful incidents against Americans of color surge amid pandemic." <https://www.theguardian.com/us-news/2020/jul/29/hate-crimes-americans-of-color-pandemic>
- Fanon, Frantz. (2001). *The Wretched of the Earth*. Translated by Constance Farrington. London: Penguin, 73-74.
- McMurtrie, John. (2015). "The Sellout," by Paul Beatty. *San Francisco Chronicle*, <https://www.sfchronicle.com/books/article/The-Sellout-by-Paul-Beatty-6115496.php>
- Meier, Alicia. (2016). "Professor Paul Beatty Wins 2016 Man Booker Prize." <https://arts.columbia.edu/news/wri-professor-paul-beatty-wins-2016-man-booker-prize>
- Oyola, Osvaldo. (2019). "WAUGH and On and On #1: Neither Fish Nor Fowl." <https://themiddlespaces.com/2019/06/04/waugh-and-on-and-on-1/>
- Wade, Peter, Audrey Smedley et.al. (2020). "Race-Human." *Encyclopædia Britannica* <https://www.britannica.com/topic/race-human/Building-the-myth-of-Black-inferiority>
- Philimon, Wenei. (2020). "Black Americans report hate crimes, violence in wake of George Floyd protests and Black Lives Matter gains." <https://www.usatoday.com/story/news/nation/2020/07/07/black-americans-report-hate-crimes-amid-black-lives-matter-gains/3259241001/>
- Russell, Anna. (2016). "Author Paul Beatty on Satire, 'The Sellout' and the Pain of Writing." *Wall Street Journal*. <https://www.wsj.com/articles/author-paul-beatty-on-satire-the-sellout-and-the-pain-of-writing-147758697>
- Tripathi, Amrita. (2017). "'Satire is an easy word to just hide behind:' Paul Beatty on his Man Booker-winning novel." *Scroll.in*. <https://scroll.in/article/827378/satire-is-an-easy-word-to-just-hide-behind-paul-beatty-on-his-man-booker-winning-novel>

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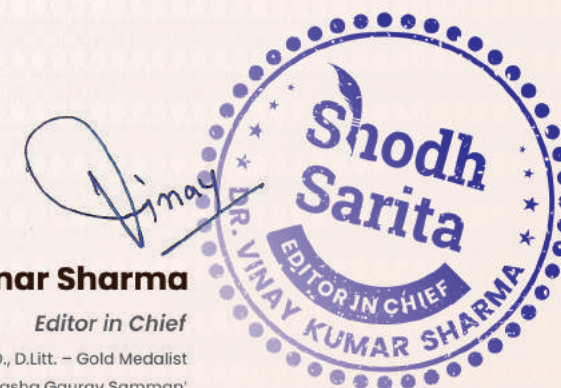
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CRITICAL ANALYSIS OF CULTURAL DISCRIMINATION IN JHUMPA LAHIRI'S 'THE NAMESAKE.'

□ Arun Kr Sarkar*

ABSTRACT

This paper focuses on the character of Ashima after she migrated from Kolkata to Massachusetts. The purpose of this study is to explore the cultural bias in the novel between Indian culture and western culture in the United States. The paper also reveals the age gap between the two generations and how the young generation will not embrace their indigenous culture. The story follows Ganguli, an Indian couple united in an arranged marriage as they build their lives together in America. It seeks to describe the influence of place and location on the interpretation and manifestation of culture and tradition. The family is a battleground where ethnic and personal distinctions collide, where Indian values conflict with American culture. Colonialism affects the political and cultural landscape of society, and thus national identity. Ihab Hassan's thesis demonstrates the society is often distinct in literature in literature. Research even adopts cultural theories to help Jhumpa Lahiri's 'The Namesake.' The story portrays many diasporas who move from their countries for bread and butter but cannot digest Western culture. The novel's main concern is that Gogol, the representative of a society without a name, is himself misnamed. The question of identity becomes critical when a person is culturally displaced and cannot be identified with either of the two worlds in which they reside. The goal of cultural studies is to understand the culture in all its complex forms. This paper focuses on Jhumpa Lahiri's first novel, 'The Namesake' The immigrant background and ethnicity are two significant factors in her writing's sudden success. First-generation Indian-Americans seek to maintain their traditions and religious convictions culturally. Second-generation Indian Americans identify themselves as being in-between their parents and their ancestors.

Keywords : cultural discrimination, 'The Namesake,' Indian Culture, Western Culture, diaspora

Introduction - The word culture is laden with numerous meanings that include concepts, beliefs, values, knowledge, etc. The cultural difference is one highlighted by the philosophy of literature. It focuses on how culture affects people as they emigrate in search of livelihood, etc. (Hariharasudan and Pandeewari). In order to support Lahiri's 'The Namesake', the current study adopts cultural theories. Cultural difference is one of the theories of literature. It focuses on culture and how people are suffering from a culture because they migrate to a foreign country to earn money. This paper reflects on Ashima's character since she is migrating from Kolkata to Massachusetts, where she is leading her life in an

oscillating way to pursue her culture in a foreign country or to follow a new culture.

Nilanjana Sudeshna "Jhumpa" Lahiri is an American author known for her short stories, novels, and essays in English, and, more recently, in Italian. 'The Namesake' (2003) is the debut novel of the American author Jhumpa Lahiri. The novel moves between events in Calcutta, Boston, and New York City. It explores the complexities of being trapped between two opposing societies with distinct religious, social, and ideological differences. Jhumpa Lahiri shows the cultural discrimination between the Indian and Western cultures, how the emigrant people would stick to their culture, and

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how they miss their rituals in foreign countries. So it will become like a dilemma between the two cultures and also shows the generation gap also between two generations. So the new generation would not ready to accept their indigenous culture. Cultural discrimination has been shown between two generations. Ashima and Ashoke both couples very particular about their culture and rituals to not correlate easily with western culture.

(Solanki) discussed Postmodernism in his research paper. He has put the light on Jhumpa Lahiri's 'The Namesake,' an example of a postmodern era where there is confusion between the original and modern. Likewise, Ashima's condition is also being like a pendulum in between the two cultures. Jhumpa Lahiri very skillfully explained the cultural differences between the diaspora who emigrated to Western countries for their bread and butter. The objective of this study to analyze the cultural prejudice between the Indian culture and western culture.

The same thing has been discussed by (Macwan) in his study: " Identity struggle in Jhumpa Lahiri's 'The Namesake': it is very tempting that Jhumpa Lahiri is the daughter of Indian immigrants as we think of Indian diaspora literature. Lahiri belongs to the second generation of the Indian Diaspora, whose constant search for identity never seems to stop. The Namesake reflects both the first generation and the second generation of Indian refugees in the USA." (Nugroho) In his research, 'The Namesake' of Jhumpa Lahiri is an example of racial discrimination and acculturation. In his study, he compared Jhumpa Lahiri's 'The Namesake' and other secondary data by applying descriptive statistics to prove cultural discrimination in America in the early 21st century. Jhumpa Lahiri has shown the tensions that have developed in the first generation of immigrant women due to their effort to maintain traditional traditions and culture in an atmosphere that is so distinct from that in which they have grown up (Lalmangaihzuali).

Jhumpa Lahiri's novel *The Namesake* was written to her great acclaim in the fall of 2003. *Namesake* builds on the perplexity of the immigrant experience and the quest for belonging. The story follows the Ganguli, an Indian couple joined in an arranged marriage, building their lives together in America. Gogol, burdened with the

long-dead Russian writer's ludicrous name, struggles awkwardly to identify himself all these characters feels cultural differentiation. Their negotiation between the self-culture and western culture held them in a dilemma. At the same time, her son Gogol is not ready to accept Indian culture because he has grown up in the American culture. The aimless roaming, looking for identity and loneliness, is a familiar trend in western literature, but for most Indian English novelists, this journey has a peculiar Indian immediacy. Identity is often a difficult problem, particularly for those who are culturally displaced "(Chaudhry).

Methodology -The methodology of the critical analysis of cultural discrimination in 'The Namesake' explains the text's key points and events through theories. Likewise, the present research adopts cultural theories to support Jhumpa Lahiri's 'The Namesake.' Lahiri points out that there are numerous cultural events, and the application of culture theory demonstrates them. The analysis also found a cultural discrepancy in Lahiri's work. The Namesake reflects the search for identity. The famous culture theorist Jürgen Habermas says that the head of the family concerns his family. He always tries to work hard to get a promising future and position in society (Goode). Likewise, Ashima and Ashok Ganguli, both the Bengali couple, were trying to play an elder's role to head in the family. Ashima also cooks the food for her family while she was pregnant. These things show the head of the house's responsibilities, which they both were playing very effortlessly. "(Adorno) shortens that pleasure means loving the moment and erasing the pain from the soul. He states that "Pleasure always means not to think about anything, to forget suffering even where it is shown."

The story of *The Namesake* moves around the culture and identity. The story represents many diasporas who migrate from their countries for bread and butter, but they cannot quickly digest Western culture. On the other hand, Gogol is not comfortable with his name given by Ashoke. Like Gogol, all the migrants in foreign countries are in search of their identity. Jhumpa Lahiri is also the child of the Indian immigrants in America. She also feels these cultural discrepancies between their parents. So the people like Lahiri's parents feel the same cultural

inequalities.(Rai and Panna)Raymond Williams said that "Cultural production is material in itself like any other human activity. Culture has to be understood in its terms as well as a part of society." Likewise, Ashima is also not ready to accept American culture; she follows the Bengali culture. She is even not ready to celebrate Christmas but later accepts it and starts to celebrate Christmas.

(Sardar and Van Loon)The main features of cultural studies are described in his book, *Introducing Cultural Studies*, orientalist scholar Ziauddin Sardar: The purpose of cultural studies is to understand the culture in all its complex forms and examine social and political contexts in which culture expresses itself. Jhumpa Lahiri's 'The Namesake' is the best example to study the diaspora's cultural aspects who confuses in between their culture and western culture and not ready to adopt it. However, later on, they equally accept that culture also to some extent. So due to that, a cultural complexity formed in the mixing of two different cultures.

(Hoggart) concise that, the fact that the remnants of what was at least a 'people's' urban culture are being destructed in some parts, is that 'We are moving towards the creation of mass culture; and that the new mass culture is in some ways less healthy than a frequently rough culture. Likewise, Ashima seeks to assimilate and enjoys Christmas and New Year celebrations like parents. Ashima's new culture says, "But it has come to pass that the Americans, despite their public declarations of affection, despite their miniskirts and bikinis, despite their hand-holding on the street and lying on top of each other on the Cambridge Common, prefer their privacy." –"(Lamich and Baadji).

Discussion-

This chapter deals with the discussion and explains Lahiri's 'The Namesake' with other notable works relevant to culture study. Lahiri's immigrant background and ethnicity are two significant factors in the sudden success of her writing. She has written many acclaimed novels that have received celebrity status. Before Lahiri's debut novel, she was unknown to the literary world. This paper focuses on Jhumpa Lahiri's first novel, "The Namesake." The novel focuses on the life of Gogol Ganguli and goes into detail about his life. (Das) has

analyzed three Indian diasporic writers: Bharati Mukherjee and Chitra Banerjee Divakaruni from the first generation of the Indian diaspora, whereas Jhumpa Lahiri from the second generation. In his research analysis in between the first and second-generation diaspora, Das wanted to show that there are also cultural differences between the old and young generation and as reflected in their diasporic literature also, which shows the different perspectives about the foreign culture through the eye of the old generation and a new generation.

(Das)For first-generation diasporas, migration produces a feeling of displacement, a longing for the past, and a sense of rootlessness at the location of migration.

(Hariharasudan and Pandeewari) depicts in their analysis that Ihab Hassan's thesis demonstrates the society is often distinct in literature. Writers point to a particular culture through literature, and people may become conscious of that culture. The speaker refers to the postmodern philosopher. Mainly, he is exhibiting about Lyotard and his work. He cites one of the postmodern problems of metanarratives that is the key explanation for accepting another society. In earlier days, some authors have used bombastic phrases and diverse storytelling forms. Likewise, Lahiri also explains cultural incidences by giving different references to cultural ceremonies and how first-generation people are being attached to their traditional culture. Jhumpa noted the 'Annaprasan' ceremony, which would take place after childbirth. So Ashoke and Ashima both celebrated this ritual in Massachusetts also by calling their Bengali colleagues.

Samivel)has beautifully placed the cultural and Generational Conflicts in Jhumpa Lahiri's 'The Namesake.' He has put the First-generation Indian-Americans are acutely aware of culture-specific things everybody in their society does. The family is a battleground where ethnic and personal distinctions collide, where Indian values conflict with American culture, and where metaphysical ideas clash with realistic implementations. In the house, first-generation Indian-Americans seek to maintain their traditions and religious convictions culturally and behave according to traditional Indian cultural principles. Second-generation

Indian Americans identify themselves as being in-between their parents and their ancestors by "compartmentalizing" their lives. Jhumpa Lahiri's 'The Namesake.' The novel's main concern is that Gogol, the representative of a society without a name, is himself misnamed Gogol. He is coping with a name he is embarrassed about and an Indian or American heritage he is not sure about. Gogol wants to redefine himself as a born and brought up in the USA rather than be associated with his parent's Bengali immigrant community. In order to have self-definition, he abandons the name of Gogol and seeks to become something else. The question of identity becomes critical when a person is culturally displaced and cannot be identified with either of the two worlds in which they reside (Bakayaraj R.).

Conclusion

The paper throws the light on cultural discrimination through Jhumpa Lahiri's 'The Namesake.' It is the best example of culture theory, which expresses cultural disparity among the Indian diaspora. It shows their urge to keep maintain their cultural heritage in Massachusetts also. For that, Ashima and Ashoke Ganguli, both Bengali Couple performed their role as an elder in their family as in Indian tradition. It is like that elder son has to play a significant role in upholding family financial responsibilities. Likewise, Ashima Ganguli also cooks for her family during pregnancy. She gave birth to her child in Boston, but she decided to celebrate her child's 'Annaprasan' ceremony in a foreign country and called their friends for this ceremony and perfumed this ritual. The story of 'The Namesake' basically turns around the Ashima and Ashoke's son Gogol. Ashoke has given this name to him as Gogol is from the next generation; he thinks this name occurred in a foreign country. Because of this, Gogol changed his name to Nikhil. The old generation is in a dilemma between the two cultures and trying to create their identity in Western countries while the next generation feels uncomfortable between them. They thought that their culture and rituals are like a burden on them. While their parents think their children should be attached to their original routes, our religious identity may get lost after some generation if they do not do so. So Ashima and the first generation are

in with this thinking, and they do not ready to leave their identity. While Gogol in search of his identity in the American society where immigrants like him always have second standard treatment in fair American society. Therefore, children like him are always trying to make an identity of themselves in the western country.

On the other hand, culture is formed by mixing different cultures; likewise, due to Indian immigrants, a mixed culture is formed. Initially, Ashima was not ready to accept the American culture as she was not ready to celebrate Christmas. However, later on, her attitude towards celebrating Christmas becomes positive, and she starts to celebrate Christmas also. The research adopts cultural theories to support Jhumpa Lahiri's 'The Namesake.' The story represents many diasporas who migrate from their countries for bread and butter, but they cannot quickly digest Western culture. The purpose of cultural Studies is to understand the culture in all its complex forms. Ashima seeks to assimilate and enjoys Christmas and New Year celebrations as like parents.

This paper focuses on Jhumpa Lahiri's first novel, "The Namesake" The immigrant background and ethnicity are two significant factors in her writing's sudden success. In the house, first-generation Indian-Americans seek to maintain their traditions and religious convictions culturally. Second-generation Indian Americans identify themselves as being in-between their parents and their ancestors by "compartmentalizing" their lives. The dispute derives from the distinct cultural structures of American Individualism and Indian Communitarianism.

References :

1. Adorno, Theodor W. "The Culture Industry Selected Essays on Mass Culture." The Culture Industry, edited by J. M. Bernstein, Taylor and Francis e-Library, 2005, doi:10.4324/9781003071297-9.
2. Asl, Moussa Pourya, et al. "Mechanisms of Mobility in a Capitalist Culture: The Localisation of the Eye of (Global) Authority in the Novel and the Film of Jhumpa Lahiri is the Namesake." *Kemanusiaan*, vol. 23, 2016, pp. 137–59, doi:10.21315/kajh2016.23.s2.8.

3. Bakyaraj R. "Diasporic Pulse: A Study of Jhumpa Lahiri's the Namesake." Research Journal of English Language and Literature (RJELAL), vol. 5, no. 1, 2017, <https://www.rjelal.com/5.1.17a/389-394R.BAKYARAJ.pdf>.
4. Chaima, Abir Lamiche and. Dislocation and Cultural Assimilation in Jhumpa Lahiri's The Namesake. University of Mohamed Boudiaf –M'sila Faculty, 2020.
5. Chaudhry, Anju. "A Critical Analysis On Identity Crisis In Jhumpa Lahiri's 'The Namesake'." Research Journal of English Language and Literature (RJELAL), vol. 4, no. 4, 2016, pp. 205–09.
6. Das, Subrata Kumar. "Diasporic Literary Worlds of Three Authors□: Bharati Mukherjee , Chitra Banerjee Divakaruni and Jhumpa Lahiri." Journal of Literary Aesthetics, vol. 3, no. 1, 2016, pp. 22–34.
7. Goode, Luke. "Jürgen Habermas. Democracy and the Public Shpere." Pluto Press:London, 2005.
8. Hariharasudan, A., and D. Pandeewari. "An Analysis of Cultural Disparity in Jhumpa Lahiri's the Namesake." Journal of Critical Reviews, vol. 7, no. 9, 2020, pp. 404–06, doi:10.31838/jcr.07.09.83.
9. Lahiri J. (2006) The Namesake, Noida, Harper Collins.
10. Lalmangaihzuoli. Situating Women In The Diasporic Narratives Of Jhumpa Lahiri. Mizoram University, Tanhril: Mizoram, 2015.
11. Macwan, Hiral. "Struggle for Identity and Diaspora in Jhumpa Lahiri's The Namesake." International Journal of Humanities and Social Science Invention, vol. 3, no. 12, 2014, pp. 45–49, [http://www.ijhssi.org/papers/v3\(12\)/Version-1/G031201045049.pdf](http://www.ijhssi.org/papers/v3(12)/Version-1/G031201045049.pdf).
12. Nugroho, Acep. Racial Prejudice and Assimilation in Jhumpa Lahiri ' S the Namesake (2003): A Sociological Approach. Muhammadiyah University of Surakarta, 2015.
13. Rai, Rumina, and Kishwar Panna. "Introduction to Culture Studies (As per BMM Syllabus of Mumbai University)." Introduction to Culture Studies (As per BMM Syllabus of Mumbai University), Fourth Rev, Himalaya Publishing House Pvt. Ltd., 2015, <http://www.himpub.com/documents/Chapter978.pdf>.
14. Samivel, S. "Cultural and Generational Conflicts in Jhumpa Lahiri's The Namesake." Language in India, vol. 19, no. 3, 2019, pp. 44–48, <http://proxy.libraries.smu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cms&AN=135537596&site=ehost-live&scope=site>.
15. Sardar, Ziauddin, and Borin Van Loon. Introducing Cultural Studies. Edited by Richard Appignanesi, Second, ICON BOOKS Ltd., Cambridge, 1999, www.iconbooks.co.uk.
16. Solanki, Vipul. "The Namesake in the Light of Postmodernism." An International Multidisciplinary Research E-Journal, vol. 2, no. 5, 2017, pp. 1–7.
17. Ustati, Rusmanizah Binti. Culture And Identity In Shirley Geok- Lin Lim ' S Joss And Gold And Jhumpa Lahiri ' S The Namesake. no. February, International Islamic University Malaysia FEBRUARY, 2010.



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RESEARCH JOURNAL is dedicated to–*



Late Phanindra Narayan Dutta Baruah

Birth: 01-02-1947 (By Birth: 30-10- 1946)

Death: 18th October, 2021

Who was a noted Linguist, Grammarian and an unrecognised Novelist. He is the only Assamese Scholar who did double Ph.D. on Assamese, Bengali and Oriya (Magadhan) languages firstly on the Comparative Linguistics field (inappropriately) and secondly on the Contrastive Linguistics field (in real sense) for his satisfaction with the Academic Perfection in University of Gauhati (1978) and University of Mysore (1996) respectively.

He retired from CIIL as Professor cum Deputy Director but started his service as Lecturer in Assamese, ERLC (Bhubaneswar, June, 1970) and endeavoured to become the Reader in Creative Literature and Lexicology (August, 1992), Director i/c, NERLC (Guwahati) and Guest faculty, Dept. of Cultural Studies, Tezpur University (2003-2004) by virtue of his multifaceted expertise.

Moreover, hundreds of National Seminars/workshops were successfully conducted under his noble co-ordinatorship. Apart from this, he himself had actively participated in more such short term courses (Language training and Assessment) of International standard throughout his life span.

সম্পাদকীয়

(ক) উত্তৰ-পূব ভাৰতত পৰ্যটনৰ সম্ভাৱনা : ক্ৰো-আৰঙৰ বিশেষ উল্লিখনসহ :

বহু প্ৰাকৃতিক শোভাৰে পৰিবেষ্টিত উত্তৰ-পূব ভাৰত। উত্তৰ-পূব ভাৰতত যেনেদৰে নৈ-নিজৰা আদিৰে ভৰি আছে, ঠিক তেনেদৰে আছে সুউচ্চ পাহাৰৰ শাৰী। এই বৃহৎ অঞ্চলটোৰ কেইবাঠাইতো পৰ্যটন ক্ষেত্ৰ গঢ়ি উঠিছে আৰু বহুতো অঞ্চলতে গঢ়ি উঠাৰ সম্ভাৱনা আছে যদিও সেয়া হৈ উঠা নাই। উপযুক্ত আন্তঃগাঁথনি আৰু পৰিকল্পনাৰ অভাৱত এই পৰ্যটন ক্ষেত্ৰসমূহে ঠন ধৰি উঠিব পৰা নাই। এই ক্ষেত্ৰত কেন্দ্ৰীয় অথবা ৰাজ্য চৰকাৰসমূহে যেনেদৰে পদক্ষেপ ল'ব লাগিছিল, ঠিক তেনেদৰে লোৱা নাই যেন অনুমেয় হয়। যাৰ বাবে প্ৰচুৰ সম্ভাৱনা থকা সত্ত্বেও এই অঞ্চলসমূহত পৰ্যটন উদ্যোগে গঢ়ি উঠিব পৰা নাই। যদিহে এই অঞ্চলসমূহক পৰ্যটন ক্ষেত্ৰলৈ ৰূপান্তৰ কৰিব পৰা যায়, তেতিয়া হ'লে অঞ্চলটোৰ অৰ্থনৈতিক ক্ষেত্ৰখনৰো যথেষ্ট উন্নতি হোৱাৰ থল আছে। এই সম্পৰ্কত ভাৰতৰ প্ৰধান মন্ত্ৰী নৰেন্দ্ৰ মোডীৰ এই মন্তব্যটো বিশেষভাৱে উল্লেখ কৰিব লগীয়া— “All the states of the North East region are blessed with natural scenic beauty, distinct historical cultural and ethnic heritage. All this offers tremendous scope for tourism in the region. There is also a great scope for mountaineering, trekking and adventure tourism in the region. If developed and promoted well, this can emerge as the biggest employer in the region. It can also add to the growth and income of the region.” (Prime Minister Shri Narendra Modi while addressing the 65th Plenary of the NEC on 27.05.2016)

উত্তৰ-পূব ভাৰতৰ সম্ভাৱনা থকা পৰ্যটন ক্ষেত্ৰসমূহক আমি দুটা ভাগত ভাগ কৰি ল'ব পাৰোঁ—প্ৰাকৃতিক পৰ্যটন ক্ষেত্ৰ আৰু সাংস্কৃতিক পৰ্যটন ক্ষেত্ৰ। বৈচিত্ৰ্যময় প্ৰাকৃতিক সম্পদ আৰু সৌন্দৰ্যৰে ভৰপূৰ কেইবাটাও ক্ষেত্ৰত ইতিমধ্যে বহুতো প্ৰাকৃতিক পৰ্যটন স্থলী হিচাপে গঢ়ি উঠিছে। কাজিৰঙা ৰাষ্ট্ৰীয় উদ্যান, মানস ৰাষ্ট্ৰীয় উদ্যান, ওৰাং ৰাষ্ট্ৰীয় উদ্যান, হাফলং, শ্বিলং, গেংটক, ছিকিম, টাৱাং আদি অঞ্চলৰ অপৰূপ প্ৰাকৃতিক সৌন্দৰ্যই মানুহক আকৰ্ষণ কৰা কাৰণেই বহুতো দেশী আৰু বিদেশী পৰ্যটকে এই অঞ্চলবোৰলৈ যায়। এই অঞ্চলবোৰৰ উপৰিও উত্তৰ-পূব ভাৰতৰ আৰু বহুতো অঞ্চলতে এনেকুৱা ধৰণৰ পৰ্যটন ক্ষেত্ৰ গঢ়ি উঠাৰ সম্ভাৱনা আছে। কিন্তু এই অঞ্চলবোৰৰ আন্তঃগাঁথনি বৰ দুখ লগা। পৰ্যটন স্থলীসমূহলৈ যাব পৰা বাট-পথসমূহৰ উন্নয়ন কৰাৰ লগতে পৰ্যটন ক্ষেত্ৰসমূহতো কিছুমান আন্তঃগাঁথনি নিৰ্মাণ কৰাৰ যথেষ্ট প্ৰয়োজন আছে। এই ক্ষেত্ৰত ৰাজ্য চৰকাৰসমূহৰ পৰ্যটন আৰু বন বিভাগে স্থানীয় লোকসকলৰ সহায় ল'ব পাৰে। বিশেষকৈ বিভাগে পৰ্যটন ক্ষেত্ৰসমূহ পৰিচালনাৰ ক্ষেত্ৰত স্থানীয় জনসাধাৰণৰ সৈতে যৌথ পৰিচালনাৰ ব্যৱস্থা কৰিব পাৰে। অৱশ্যে এতিয়া অসম চৰকাৰে এই ক্ষেত্ৰত যথেষ্ট গুৰুত্ব দিছে। ইতিমধ্যে অসম চৰকাৰে পৰ্যটকক আকৰ্ষণ কৰিবলৈ গুৱাহাটীৰ পৰা হাফলঙলৈ বিশেষ ৰেলৰ (Vistadome tourist train) ব্যৱস্থা কৰিছে।

আনহাতে উত্তৰ-পূব ভাৰত বিভিন্ন জাতি-জনগোষ্ঠীৰ বাসভূমি। এই জাতি-জনগোষ্ঠীসমূহৰ সাংস্কৃতিক সম্পদসমূহক কেন্দ্ৰ কৰি উত্তৰ-পূব ভাৰতত সাংস্কৃতিক পৰ্যটন স্থলী গঢ়ি উঠাৰ সম্ভাৱনা যথেষ্ট আছে। তেনে কেতবোৰ সম্ভাৱনাপূৰ্ণ সাংস্কৃতিক পৰ্যটনস্থলী বা ঐতিহ্যক্ষেত্ৰ (Heritage site)সমূহৰ ভিতৰত মাজুলী, শিৱসাগৰ, চৰাইদেউ, বাদুংডু'প্লা কলা ক্ষেত্ৰ, দৈজিং মহোৎসৱ, চান্দডুবি মহোৎসৱ, পথাইলাংচ'ইক' কেম্প, নাগালেণ্ডৰ কিছামা (heritage village) য'ত hornbill festival অনুষ্ঠিত হৈ আহিছে। আদি বিশেষভাৱে উল্লেখযোগ্য। বিশেষকৈ জনজাতীয়

গাঁওসমূহ সাংস্কৃতিক পৰ্যটকসকলৰ বাবে আকৰ্ষণীয় হ'ব পাৰে। বাহিৰৰ গৱেষকসকলৰ বাবে এই সাংস্কৃতিক সম্পদসমূহ হ'ব পাৰে আকৰ্ষণৰ কেন্দ্ৰ বিন্দু। আমি জনাত বহুতো দেশী-বিদেশী পৰ্যটক/গৱেষকে এই অঞ্চললৈ আহি সাংস্কৃতিক সম্পদসমূহৰ অধ্যয়ন কৰি লাভাৱান্ধিত হৈছে।

এই পৰ্যটন ক্ষেত্ৰসমূহ গঢ়ি উঠাত অকল চৰকাৰেহে বিশেষ ভূমিকা ল'ব পাৰে, এনে নহয়; বহু বেচৰকাৰী সংস্থা আৰু শিক্ষানুষ্ঠানসমূহেও এই ক্ষেত্ৰত বিশেষ ভূমিকা ল'ব পাৰে। তাৰেই উৎকৃষ্ট উদাহৰণ হ'ল বিশ্বনাথ মহাবিদ্যালয়। এই মহাবিদ্যালয়খনৰ ৰাষ্ট্ৰীয় সমাজ সেৱা সংস্থা (NSS)ই অৰুণাচলৰ সীমামূৰীয়া অতিকৈ পিছপৰা অথচ অপূৰ্ব প্ৰাকৃতিক সৌন্দৰ্যৰে ভৰপূৰ আৰু জনজাতীয় সাংস্কৃতিক পৰম্পৰাৰে চহকী এখন অখ্যাত গাঁও 'ত্ৰেণ-আৰঙ'ক এক পৰ্যটন ক্ষেত্ৰ কৰাৰ যি প্ৰচেষ্টা, সেয়া সাঁচকৈয়ে শলাগিব লগীয়া।

(খ) থলুৱা ভাষা-সংস্কৃতিৰ ওপৰত বিশ্বায়নৰ প্ৰভাৱ :

সমগ্ৰ পৃথিৱীখনতে আজি বিশ্বায়নৰ ধুমুহা বলিছে। গোটেই বিশ্বখনতে একে ভাৱ-চিন্তা, একে সাজ-পোচাক, একে আহাৰ-বিহাৰ প্ৰচলিত হ'বলৈ গৈ আছে। তাৰ ফলত সৰু সৰু জাতিসমূহৰ স্বকীয় অস্তিত্বৰ প্ৰতি একধৰণৰ ভাবুকি আহিছে। ইয়াৰ সৰ্বগ্ৰাসী ৰূপৰ কবলত পৰি সৰু সৰু জাতিসমূহৰ ভাষা-সংস্কৃতি লোপ হোৱাৰ উপক্ৰম ঘটিছে। ইতিমধ্যে বহুতো ভাষাৰেই বিলুপ্তি ঘটিছে। এই কথা ৰাষ্ট্ৰসংঘৰ প্ৰতিবেদনত স্পষ্ট ভাৱে উল্লেখ কৰা হৈছে। অসমতো ইতিমধ্যে আহোম, মৰাণৰ দৰে টাইমূলীয়া কেবাটাও ভাষা আৰু তিব্বতবৰ্মীয়মূলৰ ভালেমান ভাষাৰ বিলুপ্তি ঘটিছে। দেউৰী, তুৰুং, খাময়াং আদি ভাষা ক্ৰমাৎ বিলুপ্তিৰ পথলৈ ধাৰমান হৈছে। আনহে নেলাগে অসমৰ ৰাজ্যভাষা অসমীয়াৰ অস্তিত্বৰ প্ৰতিও ভাবুকি অহা বুলি দুই-এজন সচেতন লোকে ভাবিবলৈ ধৰিছে। এই ক্ষেত্ৰত বিশেষভাৱে অসমত য'তে ত'তে কাঠফুলা বঢ়া দি গঢ় লোৱা ইংৰাজী মাধ্যমৰ স্কুলসমূহৰ ভূমিকা মন কৰিব লগীয়া। চৰকাৰী শিক্ষা-ব্যৱস্থাৰ প'য়ালগা অৱস্থাৰ বাবে অভিভাৱকসমূহে ব্যক্তিগত অথবা খৃষ্টান মিছনাৰীসকলৰ প্ৰচেষ্টাত আৰু কেতবোৰ বহুজাতিক কোম্পানীৰ তত্ত্বাৱধানত গঢ় লোৱা ইংৰাজী মাধ্যমৰ বিদ্যালয়সমূহত নিজৰ সন্তানক নাম ভৰ্তি কৰি দিবলৈ বাধ্য হৈছে। ফলত নতুন প্ৰজন্ম ক্ৰমান্বয়ে নিজৰ ভাষা-সংস্কৃতিৰ পৰা আঁতৰি গৈ আছে।

সেইবাবে ভাৰত চৰকাৰে অতি সম্প্ৰতি সংবিধানে সুবিধা দিয়া শিক্ষাৰ অধিকাৰ আইনৰ আওতাত ভাৰতৰ সকলো ৰাজ্য আৰু কেন্দ্ৰীয় শাসিত অঞ্চলত নিজ নিজ মাতৃভাষাৰে বিশেষকৈ জনজাতীয় লোকক প্ৰাথমিক পৰ্যায়ত (পঞ্চম শ্ৰেণীলৈ) শিক্ষা লাভ কৰাৰ পূৰ্ণ স্বাধীনতা প্ৰদান কৰিছে। সংখ্যালঘু ভাষা আয়োগৰ (LMC) দ্বাৰা ইতিমধ্যে কিছু কাৰ্যকৰী কৰা হৈছিল যদিও সেয়া প্ৰকৃত্যৰ্থত শিশুক মাতৃভাষাৰে শিক্ষা লাভৰ পূৰ্ণ সুবিধা প্ৰদান কৰা হোৱা নাছিল।

যোৱা কিছু বছৰ ধৰি ৰাষ্ট্ৰৰ বিভিন্ন পৰ্যায়ত এই বিষয়ে চিন্তা-চৰ্চা হয় আৰু কেন্দ্ৰীয় শিক্ষা গৱেষণা আৰু প্ৰশিক্ষণ পৰিষদৰ (NCERT) পাঠ্যক্ৰমৰ আৰ্হিত ৰাজ্যিক শিক্ষা গৱেষণা আৰু প্ৰশিক্ষণ পৰিষদে (SCERT) এটি উচ্চ স্তৰীয় ভাষা-নীতি প্ৰস্তুত সমিতিৰ দ্বাৰা অসমত কাৰ্যকৰী হোৱাকৈ ভাষা নীতিৰ খচৰা কৰি উলিয়াইছে। এই খচৰা অনুযায়ী ক শ্ৰেণীৰ কোনো ধৰণৰ পাঠ্যপুথি নাথাকিলেও খ শ্ৰেণী বা তাৰ ওপৰ শ্ৰেণীৰ পৰা সম্পূৰ্ণ মাতৃভাষাৰে (home language) ক্ৰমাৎ ৰাজ্যিক ভাষা (MIL) আৰু ইংৰাজী ভাষা আয়ত্তৰ বাবে মানসিকভাৱে প্ৰস্তুত কৰা হ'ব। তাৰ পিছত প্ৰথম শ্ৰেণীৰ পৰা পঞ্চম শ্ৰেণীলৈ প্ৰথম ভাষা হিচাপে মাতৃভাষা, দ্বিতীয় ভাষা হিচাপে ইংৰাজী আৰু তৃতীয় ভাষা হিচাপে হিন্দী (অসমত ৫০ শতাংশ হিন্দী আৰু ৫০ শতাংশ ৰাজ্যিক ভাষা অসমীয়া) আৰু অসমীয়াৰ জ্ঞান ক্ৰমান্বয়ে বঢ়াই যোৱা হ'ব। প্ৰথম শ্ৰেণীত মাতৃভাষা আৰু অসমীয়াৰ অনুপাত হ'ব ৭০:৩০। শেহতীয়াকৈ নতুন শিক্ষা নীতি-২০২০ত প্ৰাথমিক স্তৰত মাতৃভাষাৰে শিক্ষা প্ৰদানত অধিক গুৰুত্ব আৰোপ কৰা হৈছে। আশা কৰা হৈছে চৰকাৰৰ এই আঁচনিৰে ক্ৰমান্বয়ে হেৰাই যাবলৈ ধৰা ভাষাসমূহ জীয়াই থকাত সহায় কৰিব। □□



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Demolished Identity and Colonial Politics in Amitav Ghosh's *Sea of Poppies*

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Abstract: *Amitav Ghosh, a prominent Indian English fiction writer, presents in his novel Sea of Poppies(2008) several burning socio-economic issues of the 19th century: the forced production of opium as a cash crop in Bihar and Bengal for the Chinese market, its catastrophic effects, and the transport of the first batch of Indian diaspora via the Ibis ship. Ghosh shows the damage caused by British colonial rule and the destruction of the Indian revolution and society at large. Sea of Poppies accommodates people from diverse backgrounds drawn towards a common destiny. Ghosh's novel is an epitome of a fictional representation of the time of the Opium Wars. The book's stories intertwine various myths, ideologies, languages, cultural and historical elements to portray a more true-to-life picture of the society in question. Ghosh recognizes that the overseas Indian diaspora is a vital cultural force globally, and its impact on the Indian subcontinent is growing. The fusion of multiple cultures in the Ibis throws into question the idea of national identity and brings to light the dismantled concept of national identity. The Indian Ocean is a palimpsest on which Ghosh inscribes stories of power, violence, exchange, resistance, and survival. The author prefers natural themes such as the event of an individual's life, the tension between country and people. The novel uses particular cases as rare incidents of revolt against the status quo to challenge society and its historical prejudices. The book's core theme is the denial of their homeland, their national and cultural identity, and the lower class consciousness because of immigration.*

Key words: *Amitav Ghosh, colonial politics, diaspora, emigration, Sea of Poppies.*

Introduction:

Sea of Poppies is an epitome of a fictional representation of the time of the Opium Wars, in which history forms the context to which the lives of the unfortunate are presented very realistically. The novel introduces people of diverse origins who are attracted to a shared destiny. The question of power dynamics is distinctly visible in the novel, where several characters become targets in the power play. The Ibis ship's image has been used as an apparatus to represent colonial politics and the demolished image of national identity. Deeti, a resident of Ghazipur located some fifty miles east of Banaras, begins the novel. While she faces personal challenges, the Ibis offers us a chance to see a new society and colonial politics with a critical eye.

Political and economic struggles of citizens for life, moving on to River symbolizing the flowing or running after dreams, those that are unlikely and difficult to attain on the rugged surface of the vast unknown sea. The main characters include Deeti, an ordinary village lady, a mulatto American sailor named Zachary Reid, an Indian rajah/zamindar named Neel Rattan Halder, and Benjamin Burnham, an evangelist opium trader. The novel focuses on the socio-economic themes of the 19th century: the forced cultivation of opium as a cash crop in Bihar and Bengal for the Chinese market, its catastrophic effects, and the transport of the first batch of Indian diaspora via the Ibis boats. Christian philosophy of self-control has been put on an even footing with opium-trade policy, and religion has been identified as a critical aspect of nationhood. The Christian teaching of self-control has been placed in line with guidelines concerning the opium trade, and religion has been positioned as a distinguishing aspect of national culture (Acharjee & Khuraijam 2014, 63).

It is important to note that Ghosh's victimized characters in the *Sea of Poppies* consistently oppose dominant forces by adopting post-humanist ideals of human dignity, irrespective of age, caste, or ethnicity, and a reduced emphasis on the individual 'I,' which is a prerequisite for the recognition of the other (Jain 2011, 67). Ghosh has registered his post-humanist responses in a fictional work set nearly two hundred years ago; however, there are other related instances in the real world, and these keep the book current. Deeti and her farming community are oppressed to cultivate opium. This position remains the same in places like Afghanistan and Burma, where opium production is at the top of the world but the bottom for human rights and quality of life for its people (Jain 2011, 68). It can be assumed that the 'Sea of Poppies' is politically motivated, as the author mentions opium wars, partition, India-Pakistan wars, communal protests, and migration, which form the "collective awareness of Indians." The new period of globalization and the post-colonial era have made the assumption of set identity absolute and acknowledged that identity is a multi-layer and changeable notion (Acharjee & Khuraijam 2014, 65).

Stories behind the *Sea of Poppies*:

The stories in the novel intertwine various myths, ideologies, languages, cultural and historical elements to portray a more true-to-life picture of the society in question. The decade they have

concluded with the Indian peasants being forced to grow opium poppies instead of food crops and sell the opium harvest to the East India Company, which was in control of the country and holding a monopoly on the opium trade. Opium smuggling history of the British, who robbed India of its wealth, and the Chinese, who used discretion, is brought to light by disclosing the British and the Chinese' deceitful business dealings, who were both poisoned by opium (Bergstrom & West 2020, 194). The dilemma of global circumstances and an ever-increasing cultural multiplicity is outlined by a panorama of characters that move to an alien place in a ship called the Ibis. In the colonial background, Ghosh draws attention to imperialism's historical effects leading to migration and displacement of people. These migrants, cut off from older intimate, familiar, and national links, forge a new identity with a sense of pain, anguish, and dilemma (Mahapatra 2019, 42).

Sea of Poppies features numerous cultural complexities, such as caste, marriage, and gender, being deconstructed within the novel's plot. It is interesting to note how the environment and ecology play a vital role in this period of localized, detailed-sensitive history rewriting. The novel uses particular cases as rare incidents of revolt against the status quo to challenge society and its historical prejudices (Alexandru 2017, 46).

Fusion of different cultures due to Diaspora:

The fusion of multiple cultures in the Ibis throws into question the idea of national identity and brings to light the dismantled concept of national identity. By analyzing characters like Deeti, Pierre Lambert, Serang Ali, and Zachary Reid, the ideas of multiculturalism and pluralism are established as being dominant in culture from a post-national viewpoint, and then the disassembled picture of national identity emerges on its own. Ghosh demonstrates the numerous facets of colonialism that influence the Indian community. Before beginning the Ibis Trilogy, Ghosh acquired a deep understanding of the impacts of colonial rule in India because of his extensive research on the subject (Amjad & Baharvand 2019, 32). The concept 'Diaspora' plays a central role in today's globalized environment. This term, originally used to describe the Jews who were forced to live in exile from their homeland of Palestine, can be applied in general to any group who has been pushed from their land and made to embark on painful journeys (Asthana 2017, 84). It perfectly reflects the tale and experience of the North Indian indentured laborers from the Indian diaspora. The book's core theme is the denial of their homeland, national and cultural identity, and the lower class consciousness due to immigration, as exemplified by the slave-vessel Ibis (Kalaiyaran & Vishalakshi 2018, 226).

The novel details the brutality of British colonization of the Indians to achieve full gain from colonialist endeavors. Whether a nation can be home to others such as Deeti, a widow saved by a low caste Kalua from a funeral pyre, or Raja Neel Ratan, a political outsider, is debatable. A lot of otherness occurs because caste is deeply rooted in Indian culture. The novel seems to focus on people and the nationalized nation as they question the national paradigm.

The caste system was at the heart of Indian society, as Amitav Ghosh argues in this novel (Singh 2019, 147). Ghosh recognizes that the overseas Indian diaspora is a vital cultural force globally, and its impact on the Indian subcontinent is growing. However, he discourages his interests in India.

Contrast of Various Languages and Idioms:

An exhilarating adventure for language learners begins with the novel as Ghosh conducts a cut-and-paste survey of different languages and expressions that were in use at a particular time and place on the *Ibis*, which offers a case study for globalization in the making. The novel focuses on this vessel, which was refitted to carry indentured workers known as *girmitiyas* after Britain abolished slavery (Guilhamon 2011, 70). The Indian Ocean is a palimpsest on which Ghosh inscribes stories of power, violence, exchange, resistance, and survival. The book explores the reconstitution of families within prevailing and rebellious environments. The sea trading routes crisscross the world visually understandably, offering an emotional map of the world of unlikely kinships and intimacies that stem from the ocean's fluid world because of Empire's machinations and practices. In response to Eurocentric history, Ghosh reclaimed the Indian Ocean as a site full of diverse history, containing conflict, conflict resolution, and cooperation (Roy 2016, 52).

Babes Nob Kissin, a mysterious passenger comments on *Ibis*, "The *Ibis* was not a ship like any other; in her inward reality, she was a vehicle of transformation traveling through the mists of illusion towards the elusive, ever-receding landfalls that were the truth" (Tiwari 2017, 430). Amitav Ghosh's fiction reveals that migrants, immigrants, and homeless people are radically unified on *Ibis*, setting away from their static societies and identities; history makes sense of modernity, articulating new novel concepts, i.e., rationalism, enlightenment, liberty, individuality, state, civil society, democracy and the survival of the Diaspora (Sharma 2019, 14). To explore the movements of influence, Ghosh represents the universe as historically built and generates discursive realities, seeking to find a way to avoid the domain of debate dominated by the hegemonic Western system of development of knowledge and its narrating methods world (Huttunen 2012, 132).

Amitav Ghosh prefers natural themes such as the event of an individual's life, the tension between country and people, the role of remembrance in restoring one's identity with time, the feeling of nostalgia, the problems of displacement, the sense of longing, the love of native land and the essence of adaptability in the place of settlement (Priya 2016, 2). The *Ibis* draws together various ill-assorted characters – seamen, convicts, and coolies – to be shipped to the Islands of Mauritius. This novel subtly blends fantasy with study and scholarship, focuses primarily on the motley crew gathered on board the ship and the different roundabout ways in which each character ended up on the ship. Since Ghosh's characters undergo diaspora when moving between locations and looking back on their pasts while discovering new ethnicities and trying out new languages, his work can be used as an example of this issue.

Conclusion:

Diaspora is a journey of identity and culture through time and space. Amitav Ghosh is one of those contemporary Indian novelists who combine their professional skills as social historians with a literary flair to produce works of art deeply concerned with civilization and history. As a social historian, he blends literary talents with a detailed knowledge of culture and history to generate works of art that profoundly influence society. The novel *Sea of Poppies* is an epitome of a fictional representation of the time of the Opium Wars. The main characters include Deeti, an ordinary village lady, a mulatto American sailor named Zachary Reid, an Indian rajah/zamindar named Neel Rattan Halder, Benjamin Burnham, an evangelist opium trader. The novel focuses on various socio-economic themes of the 19th century. The novel's stories intertwine various myths, ideologies, languages, cultural and historical elements to portray a more true-to-life picture of the society in question. It features numerous cultural complexities, such as caste, marriage, and gender, being deconstructed within the novel's plot. The fusion of multiple cultures in the *Ibis* throws into question the idea of national identity and brings to light the dismantled concept of national identity. The novel uses particular cases as rare incidents of revolt against the status quo to challenge society and its historical prejudices. The novel's core theme is the denial of their homeland, their national and cultural identity, and the lower class consciousness due to immigration. The novel details the brutality of British colonization on the Indians to achieve full gain from colonialist endeavors. □□

References:

1. Acharjee, S. & Khuraijam G. (2014). Representation of Dismantled Identity and Colonial Politics in Amitav Ghosh's *Sea of Poppies*. *International Journal of English Language, Literature and Humanities*, 2(3), 59–67.
2. Alexandru, M. S. D. (2017). Routes Beyond Roots: Alternative Ecological Histories In Amitav Ghosh's *Sea Of Poppies*. *Indi@logs*, 4, 37–50. <https://doi.org/http://dx.doi.org/10.5565/rev/indialogs.78>
3. Amjad, F. A. & Baharvand, P. A. (2019). Detrimental Impacts of Poppy Monoculture on Indigenous Subjects, Plants, and Animals: An Ecocritical Reading of Amitav Ghosh's *Sea of Poppies*. *Contemporary Literary and Cultural Studies*, 1(1), 21–37.
4. Asthana, S. R. (2017). Introducing Amitav Ghosh. *Research Journal Of English (RJOE)*, 3(2), 75–86.
5. Bergstrom, C. T. & West, J. D. (2020). *Calling bullshit/: The art of skepticism in a data-driven world*. Random House, New York, 1-370. https://literariness.org/wp-content/uploads/2020/09/Literariness.org-Carl-T.-Bergstrom-Jevin-D.-West-Calling-Bullshit_-The-Art-of-Skepticism-in-a-Data-Driven-World-Random-House-2020.pdf
6. Burton, A. (2012). Amitav Ghosh's World Histories from Below. *History of the Present*, 2(1), 71–77. <https://doi.org/10.5406/historypresent.2.1.0071>
7. Ch.Swathi. (2014). Human-History Conflict In Amitav Ghosh's *The Shadow Lines And Sea Of Poppies*. *Asian Academic Research Journal Of Multidisciplinary-AARJMD*, 1(18), 676–690.

8. Ghosh, Amitav. 2009. *Sea of Poppies*. New Delhi: Penguin.
9. Guilhamon, L. (2011). Global Languages in the Time of the Opium Wars: The Lost Idioms of Amitav Ghosh's *Sea of Poppies*. *Commonwealth Essays and Studies*, 34(1), 67-76.
10. Huttunen, T. (2012). Amitav Ghosh's *The Circle of Reason* — Dismantling the idea of purity. *Nordic Journal of English Studies*, 11, 126-145.
11. Jain, S. (2011). A Posthumanist Response to Amitav Ghosh's *Sea of Poppies*. *Kontur*, 22(22), 66–74.
12. Kalaiyarasan, G., & Vishalakshi, R. (2018). Diasporic Consciousness in Amitav Ghosh's *Sea Of Poppies*. *Research Journal of English Language and Literature (RJELAL)*, 6(3), 224-227.
13. Latumeten, A. A. T. (2017). Discovering Environmental And Social Justice In Amitav Ghosh's *Sea of Poppies*. *Sanata Dharma University Yogyakarta, Indonesia*.
14. Mahapatra, N. (2019). Literary Herald Literary Herald. *TLHjournal*, 5(1), 36–50.
15. Mukherjee, D. (2015). Treatment Of Diaspora In Amitav Ghosh's Fiction/ : A Reading Of His Select Novels. *International Journal Of English Language, Literature And Translational Studies (IJELR)*, 2(4), 69–74.
16. Priya.R, D. R. (2016). Diasporic Sensibilities in The Select Novels of Amitav Ghosh. *International Multidisciplinary Innovative Research Journal -An International Refereed e-Journal of Literary Explorations*, 1(1), 1-9.
17. Roy, B. (2016). Reading affective communities in a transnational space in Amitav Ghosh's *Sea of Poppies*. *NJES Nordic Journal of English Studies*, 15(1), 47–70. <https://doi.org/10.35360/njes.351>
18. Sharma, A. (2019). Amitav Ghosh's *Sea Of Poppies*: A Transnational Diaspora From Roots To Routes. *Global Research Forum on Diaspora and Transnationalism*, 5(2), 1–18.
19. Singh, M. (2019). Understanding Caste Based Discrimination And Exploitation In Colonized India: A Study Of Amitav Ghosh "S Sea Of Poppies. *Journal of Interdisciplinary Cycle Research*, 11(8), 143–149.
20. Tiwari, S. (2017). Constituents And Issues Of Identity Construction Among Diaspora Communities In Amitav Ghosh's Novel *Sea Of Poppies*. *International Journal of English Language, Literature in Humanities*, 1(VII), 426–442.

FEELINGS OF ALIENATION AND EXILE IN V. S. NAIPAUL'S 'A HOUSE FOR MR. BISWAS'

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ABSTRACT

The novel "A House for Mr. Biswas" describes the development and socioeconomic alienation of a postcolonial subjectivity. There are a large number of Indian diaspora authors. They are Indians who came to other places searching for economic opportunities and picked topics on their Indian background. He adds, "I have a place that will never turn me away." The main character in V.S. Naipaul's 'A House for Mr. Biswas', Mr. Biswas, goes from his childhood home where he was kept in alienation due to turban of superstition. Naipaul very nicely showed the journey of Mr. Biswas from home to home, which was never feel him like a house neither the Trinidad where he came for bread and butter. Finally, the title is well suited that Mr. Biswas decided that A house for himself which doors he can open and close at any time without any others control. The novel portrays the life of an evolving and socially marginalized postcolonial subjectivity. The Indian diaspora in this novel represents the three generations suffering subaltern. The core goal is to focus on the lack of success in postcolonial countries. It is one of the best masterpieces in his literary life and is closer to Naipaul's heart. The novel's essential elements are their loneliness, dissatisfaction, and affection for their very conservative society and Hindu norms.

Keywords: Indian Diaspora, A house, alienation, exile, postcolonial era

Introduction

Indian Diaspora is widely reported and extensively explored in the literature by V. S. Naipaul. The Indian diaspora people keep their identity of Indianness with them even after their final departure from India & the circumstances of that time of that nation in which they migrated. It is a globally acknowledged fact that writers of the diaspora have been setting a pattern since independence. Literature in the diaspora, regardless of language, style, literary type, and technique, draws readers across borders. It may be the flow of consciousness or magical realism, or globalization, or alienation or adaptation of a new land and culture (Lakshmi & Chithra, 2016). Diasporic or immigrant writing is critical amongst cultures and countries (Lakshmi & Chithra, 2016). A House for Mr. Biswas is a novel that portrays the life of Mohan Biswas. That is why, symbolically, the novel is called 'A House for Mr. Biswas'. The novel 'A House for Mr. Biswas' presents expatriation features such as moving from the countryside to Port of Spain, the capital city. It covers the story of the children of Bipti and Raghu, Mohan Biswas, and Shama and Mr. Biswas.

How the Story begins in 'A House for Mr. Biswas'

The novel begins with Mr. Biswas' death, and the story moves to tell his past life. Mr. Biswas thinks he is going to live a luxurious life because Shama belongs to a wealthy family. Even though Biswas is one of the Tulsi family's relationships, he feels lonely (Rajkumar et al., 2016). The novel *A House for Mr. Biswas* portrays the life of the author, called Mohan Biswas. Biswas plans to build a house for himself. He thinks a home would render him a human when he works so hard before the day of his death. The book is an autobiographical, intimate novel that celebrates the author's father's African origins. The novel *A House for Mr. Biswas* introduces aspects of expatriation, such as shifting from the countryside to Port of Spain's capital city. It covers the story of three generations, Bipti and Raghu, Mohan Biswas and Shama, and the children of Mr. Biswas.

Indian Diaspora During the Postcolonial Era

"The House of Mr. Biswas" (1961) is one of the most notable texts of the literature of the diaspora in which V. S. Naipaul deals with culture, isolation, identity crisis, the friendship crisis of the Indo-Caribbean group (Podder, 2018). V.S. Naipaul's writings address small problems in narrow and small settings and show nothing but great gravity. His best works are about Trinidad. Novels set in Trinidad are always self-reflexive, reflective, and profound. As an authoritative writer about postcolonial societies, he writes magnificently. Diasporic themes are prominent in his works (S. K. Saha, 2014). (Jabar, 2015) discussed in his thesis about Naipaul deals with British colonization in postcolonial Trinidad and the continuing legacy of colonialism in Africa. These legacies are physical, psychological, cultural, political, and social. Some novels express the perspectives of migratory Indians who are part of both Trinidad and African countries.

The Metaphors of Homelessness

In 'A House for Mr. Biswas,' Naipaul creates a prototype of an autonomous self-embodied in a built world's ecological terms. Breaking out of the paradigm of colonial and religious positivism, Naipaul puts, for himself and his literature, a cornerstone in West Indian society, a room characterized by its absence. As an abstract concept of "exile," the resultant tentativeness takes with it his claim of liberty by a twisted sense of national belonging (Bushnell, 2008). V. S. Naipaul's books are full of the metaphors of homelessness and reflect the fractured selves of the shipwrecked diaspora lost in the mysterious realities of foreign territories. Here, the book traces the evolving paradigms of the ambivalence of the Diaspora in V.S. novels. Naipaul, who appears to be called a poetic sojourner, has a dispassionate treatment of all the intricacy of relocation. However, the ideas of imperialism, de-territorialization, and multiculturalism may have trivialized the Diasporas' debates. However, the present thesis aims to revive and preserve the charm of the topic by exploring the uncharted realms of the Nobel Laureate's fictional representation (Sharma et al., 2012).

Methodology

The author read and studied several canonical or prototypic literary works, essays, and journal papers on the personality and psychic trauma of the characters mentioned in V.S. Naipaul's writings. The analytical insights and the other authors' literary critique would be

added to the analyses of Naipaul's writings. The depiction of personality crises and internal sufferings in novel 'A House for Mr. Biswas' through the characters have been investigated. The author also studied the theoretical viewpoint on Naipaul's writing so that the research work will stand up with full strength. For a better understanding of the diaspora, the author went through the similar literature of Jhumpa Lahiri's 'The Namesake,' Chinua Achebe's 'Things Fall Apart'.

Results and Discussion

The research study shows that how Mr. Biswas and other characters in this novel struggle for their identities. A House for Mr. Biswas depicts the exile and alienation from a faith of the Indian diaspora. The Indian diaspora in this novel represents the three generations suffering subalterns. They never forget their motherland after so many years of residence in Trinidad. Diaspora in this novel and other Indian diasporic novels never thought they are a part of the society of immigrated land. Naipaul very wisely states the difference between A house and an A home. The essential elements in the novel are their loneliness, dissatisfaction, affection for their very conservative society, and Hindu norms. A House of Mr. Biswas, with the aid of the idea of creolization, reveals how the immigrant Indian citizens, as a consequence of fleeing their nation and moving to the colonial and Creole societies of Trinidad, adjust their identities and practices to adhere to the norms and laws of the prevailing society (Siamardi and Didari, 2015).

(SAHA, 2020) stated in her research paper that Mr. Biswas's struggle to achieve an independent identity in his life seems to have failed, but after he died in debt and the end of his son Anand, Mr. Biswas was able to achieve his dream. In the novel, Naipaul indicates that people who are displaced must have a crisis over their identities and sufferings in their lives. By moving from Hanuman House to Green Valley to Shorthills to Port of Spain to own a house, he shows the difficulties he went through as he struggled to escape his identity crisis. Naipaul is self-referential in his prose, drawing on his life experiences. His novels concentrate on the sense of isolation, displacement, the emotions in a state of exile, the hindrances of exploitation, the social injustices, the tug of war between Western and Eastern Christianity, and the transition from a medieval society to a colonial capitalist world. Death, migration, and social castration are the main themes of the first-generation refugee, and these themes contribute to some of his life activities (Dwivedi, 2018). The author depicts characters who choose to assimilate and learn from the new culture and tradition. The Indian Diaspora writers are from various Indian parts who settled in other areas and chose topics based on their Indian context. They select the vital subject for the Indian culture, tradition, and values (Roychowdhury, 2018).

V.S. Naipaul addresses complex diasporic consciousness contents in a simple existential voice and examines the tropes of loss of identity, culture conflict, psychological crisis, alienation, and rootlessness due to displacement in his novels. The story of a new immigrant who desires to strike roots and attain an authentic home is poignantly portrayed in the novel 'A House for Mr. Biswas' (Dash & Chetia, 2017). Naipaul's Trinidadian history and education in England on the protagonist in his novel are evident. The novel describes the precarious condition of an author trying his best to construct his post-war work in London and New York (Wadhwa, 2017).

However, on his deathbed, when he is sick, unemployed, in debt, Mr. Biswas has the comfort that he has a house which he considers his own, that he may shut or open its doors at will, that he has a place which will never refuse him entry (Roychowdhury, 2018). (Christina, 2020) discussed the Naipaul's safely and correctly observes that he examines the diasporic consciousness of several indentured laborers who are continually in isolation, displacement, and desperately looking for certain ideals in their lives, but who struggle miserably. Indian diaspora writers focused on the migration aspects, incorporation, and adaptation processes in a particular way and focused mainly on aspects of the community, identity creation, and preservation, meaning that the cultural process dealt with by the Indian diaspora is interpreted in terms of either preserving its home culture or, in due course, incorporating it with the host society in the long term (Kumar, 2017).

In the quest for and attempts of his almost picaresque hero, Mr. Biswas, to build a house for himself by refusing a ready-made household, Naipaul tries both to renounce the second-hand tradition of the receding colonial wave, as well as to rebuild for himself an identity (Ghosh, 2011). The novel 'A House for Mr. Biswas' was intended to be his first novel to achieve worldwide acclaim. The term alienation applies to an exceptional array of psycho-social conditions, including lack of individuality, fear, anomie, depression, depersonalization, rootlessness, apathy, social disorganization, powerlessness, senselessness, loneliness, pessimism, and loss of conviction or meaning (Princy, 2019).

(Saher, & Sadaf, 2017) said, 'A House for Mr. Biswas', food offers exciting ways to manipulate, adapt and disclaim identities and is the most potent metaphor for the crisis of self-representation. Food becomes a strong voice for the emptiness that lives like a physical longing and constant discomfort. Identity tends to be tactile and instinctive when it comes to food. Interestingly, in the postcolonial moment, food seems to lose its potential for pleasure, either serving as a catalyst to elicit dissatisfaction or a symbol for self-absorption that the displaced generally encounter. His works are nothing but a fight for self, a struggle for the right, and a voice against suppression and exploitation (Singh et al., 2013).

(Muhammed, 2018) discussed the feminism in Naipaul's novel 'A House for Mr. Biswas,' he said that Vidiadhar Surajprasad Naipaul was a feminist writer is true, as his novel A House for Mr. Biswas gives significant roles to women in order to bring to light the disparity of the sexes and to inspire women to better themselves and to share their rights with men.

Conclusion

Vidiadhar Surajprasad Naipaul's novel 'A House for Mr. Biswas' was intended to be his first novel to achieve worldwide acclaim. The book is an autobiographical, intimate novel that celebrates the author's father's African origins. It is one of his most famous works about the Indian Diaspora, which is widely reported and extensively explored in the literature by V.S. Naipaul. 'A House for Mr. Biswas' represents refugees' plight suffering from culture shock, hybridity, and mimicry. The feeling of dislocation and displacement of every diasporic character have been narrated so accurately. The novel portrays the life of an evolving and socially marginalized postcolonial subjectivity. 'A House for Mr. Biswas' is a novel about those who have continuously fought with the conflicting powers of their commitment to their families and their own need for freedom.

REFERENCES

1. Bhaumik, R. (2020). A House for Mr. Biswas : A diasporic novel on displacement as a disorienting condition. *Juni Khyat*, 10(7), 198–201.
2. Bhuiyan, M. F. U. (2019). Diaspora Identities and Psychic Trauma in V.S. Naipaul's A House for Mr. Biswas and The Mimic Men: A Postcolonial Perspective. *International Journal of English Literature and Social Sciences*, 4(5), 1416–1419. <https://doi.org/10.22161/ijels.45.27>
3. Bushnell, C. (2008). Foundational Acts : Enunciating A West Indian Literary Tradition in Naipaul ' s Mr . Biswas. *South Asian Review*, 29(2), 83–108. <https://doi.org/10.1080/02759527.2008.11932598>
4. Christina, S. S. (2020). Portrayal of Diasporic Consciousness in V . S . Naipaul ' s A House for Mr . Biswas. *Linguistica Antverpiensia*, 2, 49–54.
5. Dash, B. C., & Chetia, K. (2017). Between House And Home : Situating The Diasporic Sensibility of V . S . Naipaul. *Research Journal of English Language and Literature (RJELAL)*, 5(3), 193–198.
6. Dwivedi, M. (2018). Theme of Exile i n V . S Naipaul ' s Novel ' A House for Mr . Biswas '. *Research Review International Journal of Multidisciplinary*, 03(09), 246–250.
7. Ghosh, O. (2011). ' To lay claim to one ' s portion of the earth ' : Leaving a Mark on History in A House for Mr . Biswas. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 3(4), 578–585.
8. Jabar, B. (2015). *Legacy of British Colonialism in V. S. Naipaul's A House for Mr. Biswas and A Bend in the River: A Postcolonial Study* (Issue May) [UNIVERSITY OF SULAIMANI IN]. <https://doi.org/10.13140/RG.2.1.4054.9285>
9. Kaur, A., Khanna, P., & Khanna, A. (2017). Cross-Cultural Currents In V.S.Naipaul's A House Of Mr. Biswas. *Research Scholar- An International Refereed e-Journal of Literary Explorations*, 5(II), 171–177.
10. Kumar, S. (2017). Diaspora : A New Dimension of Literature. *RESEARCH REVIEW International Journal of Multidisciplinary*, 2(07), 19–20.
11. LAKSHMI, D. S.CHITHRA, V. B. (2016). Indian Diaspora Writers– A Study. *Anveshana's International Journal Of Research In Education, Literature, Psychology And Library Sciences*, 1(2), 40–44.
12. Muhamed, A. J. (2018). Women identity in the novel a house for Mr. Biswas by V.S.Naipaul. *Journal of the College of Basic Education*, 24(102), 19–28. <https://www.iasj.net/iasj/article/159584>
13. Naiker, K. L. (2017). International Journal of Advances in Social Science and Humanities Progress amid the East-Indians in V . S . Naipaul ' s Selected Fiction. *International Journal of Advances in Social Science and Humanities*, 5(5), 19–25.
14. Naipaul, V. S. A House for Mr. Biswas. London, Picador Classics. 2016.
15. Podder, K. (2018). Crisis In Relationship In A House For Mr.Biswas. *Research Guru Online Journal of Multidisciplinary Subjects*, 12(1), 699–703.
16. Princy, A. S. J. (2019). A Study Of Gerontology And Alienation In V. S. Naipaul's A House For Mr.Biswas. *Literaray Herald- An International Refereed/Peer-Reviewed English e-Journal*, 5(1), 29–35.
17. Pushpam, L. (2019). Cultural Studies in V . S . Naipaul ' s A House for Mr. Biswas. *INFOKARA RESEARCH*, 8(11), 169–173.

18. Radman, A. (2018). *The Reciprocity of Home and Identity in V . S . Naipaul ' s A House for Mr Biswas : Postcolonial Dilemma of*. 8(3), 72–76. <https://doi.org/10.29322/IJSRP.8.3.2018.p7512>
19. Rajkumar, N., Ed, B., & Phil, M. (2016). *Expatriate as the Subaltern in V . S . Naipaul ' s A House for Mr . Biswas and A Bend in the River*. 16(June), 110–119.
20. Roychowdhury, P. I. T. I. (2018). When Will The Diaspora 'Arrive'? A Study Of Selected Novels Of Indian Diaspora. *Research Journal of English Language and Literature (RJELAL)*, 6(2), 168–170.
21. Saha, A. S. (2009). Exile Literature and the Diasporic Indian Writer. *Rupkatha Journal on Interdisciplinary Studies in Humanities (ISSN, 1(2)*, 186–196.
22. SAHA, P. (2020). Identity Crisis As A Threat To Mr. Biswas's Existence In V. S. Naipaul's A House For Mr. Biswas. *Research Journal of English Language and Literature (RJELAL)*, 8(1). <https://doi.org/10.33329/rjelal.8.1.362>
23. Saha, S. K. (2014). *The Notion of Hybridity in V . S . Naipaul ' s Novels : A Reading of The Mystic Masseur , A House for Mr . Biswas & The Mimic Men* (Issue August). BRAC University.
24. Saher, N. & Sadaf, S. (2017). We Are What We Eat In A House for Mr Biswas and the Inheritance of Loss. *JHSS*, XXV(1), 73–88.
25. Sharma, A., Malik, J., & Sharma, V. (2012). Diaspora : The Different Aspects in V . S . Naipaul ' s Naipaul ' s Novels. *IJLESS International Journal of Languages, Education and Social Sciences*, 01(02), 1–5.
26. Siamardi, D. (2015). A Postcolonial Appraisal of V . S . Naipaul ' s A House for Mr . Biswas. *International Journal of Applied Linguistics & English Literature*, 4(2). <https://doi.org/10.7575/aiac.ijalel.v.4n.2p.104>
27. Singh, B., Seth, V., Ghosh, A., Markandaya, K., Desai, A., Walker, A. M., Morrison, T., Rai, A., Achebe, C., & Thiango, N. (2013). Representation of postcolonial identity in Naipaul ' s works. *International Journal of English and Literature*, 4(10), 451–455. <https://doi.org/10.5897/IJEL2013.0481>
28. Wadhwa, S. (2017). *Hybridity And Mimicry In V S Naipaul ' S Novels A House For Mr Biswas , The Enigma Of Arrival & Half A Life* Ph D scholar. 2636.

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Field efficacy of brinjal wilt with potential fungicides, biocontrol agents, and plant extracts

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Abstract

Two fungicides viz Carbendazim (@ .1%) and Mancozeb (@ .2%), one biocontrol agent (*Trichoderma viride*) @ 10⁸ conidia/ml, and two plants extracts (*Allium sativum* and *Allamanda cathartica*) @15% were investigated against wilt disease of brinjal under field condition. Treatments were evaluated on three varieties susceptible to wilt disease of brinjal. The field trial revealed that Carbendazim showed the highest ($V_1=80$, $V_2=76.8$, $V_3=78.3$) percent reduction of wilt disease, and its efficiency different significantly from the rest of the other treatments. Next *Trichoderma viride* gave the second-highest ($V_1=68$, $V_2=60.6$, $V_3=65.2$) percent followed by Mancozeb ($V_1=60$, $V_2=46.6$, $V_3=56.6$) percent reduction. Among the two botanical extracts applied *Allium sativum* extract showed ($V_1=39.9$, $V_2=23.1$, $V_3=34.7$) percent and *Allamanda cathartica* ($V_1=27.8$, $V_2=16.2$, $V_3=21.6$) percent reduction over control. Present research revealed that systemic and sulfur-containing fungicides, bi-agent, and plant extracts have the potential to control wilt disease of brinjal.

Keywords: Brinjal, wilt disease, Fungicides, Biocontrol agent, Plant extracts.

1. Introduction

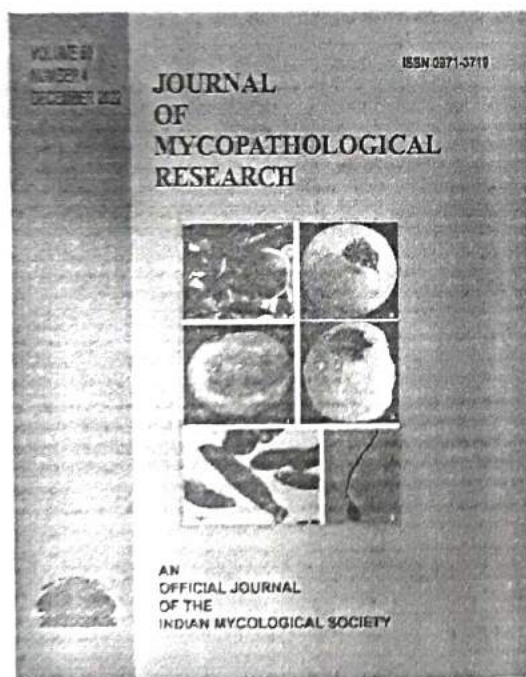
Brinjal (*Solanum melongena* L.) is one of the most important vegetables that is cultivated around the world belongs to the family Solanaceae. India is considered to be the center of origin of cultivated brinjal from where it spread to other parts of the world. In India, brinjal is mainly grown in the states like West Bengal, Assam, Orissa, Bihar, Gujarat, Maharashtra, Andhra Pradesh, and Karnataka, etc. The crop is susceptible to various biotic and abiotic stresses at different stages of growth and development, among them the most significant being wilt disease. It suffers from more than 20 different diseases of which *Fusarium* wilt is the most destructive one throughout the world (Dwivedi & Enespa, 2013). Various workers in different countries of the world evaluated the efficacy of various fungicides and plant extracts against *Fusarium* spp. under laboratory and field conditions (Joseph et al., 2008; Parsa et al., 2013). Members of *Fusarium* species are ubiquitous soil-borne pathogens of a wide range of horticultural and food crops which cause destructive vascular wilts, rots, and damping-off diseases (Bodah, 2017) *Fusarium oxysporum* is an important, soil-inhabiting ubiquitous fungus, known for its phylogenetic diversity (Xiong & Zhan, 2018).

2. Materials and Methods :

Based on good performance showed at *in vitro* tests two fungicides, one bio-agent, and two plants extracts were selected for their efficacy in controlling wilt disease under natural fields condition.

***In vitro* evaluation of root, leaf and seed extracts of *Ricinus communis* and bio-control agents against Fusarium wilt of brinjal**

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Sabebaro Namo Das

In vitro evaluation of root, leaf and seed extracts of *Ricinus communis* and bio-control agents against Fusarium wilt of brinjal

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Brinjal or eggplant (*Solanum melongena* L.) is an important vegetable crop grown in Assam. *Fusarium* wilt disease of brinjal caused by *Fusarium oxysporum* is an important disease of all brinjal growing field which cause heavy losses to the farmers. The present investigation has been carried out with the antifungal activity of *Ricinus communis* viz. (root, leaf and seed) extracts and two species of *Trichoderma* inhabiting the pathogen *in vitro*. Result showed seed extracts of *R.communis* at 15% concentration 68% inhibition followed by root extracts 66.5% and leaf extract 56.4%. Among the two species of *Trichoderma* tested, *T.viride* was found to be most effective with 83% inhibition followed by *T.harzianum* 70.33% inhibition respectively over control after 7th days of incubation.

Key words: Antifungal, eggplant, extract, *Fusarium oxysporum*, *Ricinus communis*

INTRODUCTION

Brinjal is one of the most popular vegetables crop grown in India and other parts of the world. It can be grown in all season. It is cultivated as a food crop which has also many medicinal value (Daunay and Janick, 2007). The crop is suffers from more than 20 different diseases of which *Fusarium* wilt is the most destructive one throughout the world (Dwivedi and Enespa, 2013). It is caused by *Fusarium oxysporum* f.sp. *melongenae* which decreases the level of quality and quantity of eggplant's fruit.

Fusarium species are ubiquitous, soil-borne pathogens of a wide range of horticultural and food crops that damage vascular wilts, rots, and damping off diseases (Bodah, 2017). Symptoms initially appeared as leaf chlorosis, yellowing of foliage which later wilting and drooping of leaves. The xylem became brown in colour of the stem due to blockage of the vessel and finally sudden death of the above ground parts (Pietro *et al.* 2003). There are report from farmer that due to attack of *Fusarium* wilt the eggplant losses

yield 20%-30% Begum (2007). Wilt problems are especially severe in the humid tropics and it can cause upto 70% yield losses in Pakistan (Ashfaq *et al.* 2014). In view of the high cost of chemical pesticides and their hazardous to environment use of biodegradable different naturally occurring substances plant extracts which were less toxic, safe to use and eco-friendly gained importance of plant disease control (Duru *et al.* 2003; Saxena *et al.* 2005; Lee *et al.* 2007; Sitara *et al.* 2008).

Plant extracts of many higher plants have been reported to exhibit antibacterial, antifungal and insecticidal properties under laboratories trials (Okigbo and Ogbonnaya, 2006; Mohana and Raveesha, 2006; Satish, 2007). Effective and efficient management of crop disease is generally achieved by the use of synthetic pesticides (Kiran *et al.* 2006). Biological control through the use of antagonistic microorganism for the development of integrated management strategy against the disease has emerged as a viable option (Alvinda and Natsuaki, 2009). Use of *Trichoderma* as a bio-control agent for control of soil borne plant pathogens has been described by (Morsy *et al.*, 2009; Sabalpara *et al.* 2009). Now different species of *Trichoderma* are used successfully to control

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ANTIOXIDANT ACTIVITY OF TRADITIONAL HERBAL DRUGS USED IN THE TREATMENT OF JAUNDICE

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Abstract: Jaundice is not a disease rather a symptom that can show up in several disease conditions. The manifestation of jaundice is due to the severe hepatic damage and excessive release of a yellow pigment called bilirubin to blood. The process of RBC destruction is called haemolysis and the jaundice caused this way is called haemolytic jaundice. The other two types of jaundice are called hepatocellular jaundice and obstructive jaundice. In our body, a balance between oxidative free radicals and antioxidants is usually maintained and this is a prerequisite for a normal health. Overloading with the free radicals and significant depletion in the supply of antioxidants lead to an act of imbalance termed as oxidative stress in health science. Oxidative stress causes haemolysis. Severe oxidative stress is considered one of the principal factors causing jaundice. The hepatoprotective property of certain herbal drugs may be attributed to their antioxidant potential. All plants produce chemical compounds as part of their normal metabolic activities. The curative properties of drugs are due to the presence of complex chemical substances of varied composition (present as secondary plants metabolites) in one or more parts of these plants. A large number of plant based materials are recognized as hepatoprotective herbal drugs, and these are traditionally being used for the reversal of jaundice in ethno-medicine.

Keywords: Jaundice, medicinal plant, traditional herbal drug, oxidative stress, free radical, antioxidant, haemolysis, bilirubin, hepatic damage, DPPH.

1. Introduction:

Jaundice is not a disease rather manifestation of severe hepatic damage and excessive release of a pigment, bilirubin, to blood. Yellow staining of the skin and eye caused by high level of bilirubin in blood is often termed as the incidence of jaundice [1]. Bilirubin is a lipophilic linear tetrapyrrole (Figure 1) which is toxic and insoluble in blood [2]. The colours of skin and eye of the affected person may vary depending upon the level of bilirubin [1].



Figure 1: Molecular Structure of bilirubin (C₃₃H₃₆N₄O₆) [1]

Accumulation of the pigment bilirubin in the blood stream may result from either over production of bilirubin or impaired hepatic metabolism of the pigment [3]. If the production of RBC in blood falls below normal as well as for any reason RBCs die at a faster rate than normal, then bilirubin can accumulate in the blood and cause jaundice



Understanding the influence of traffic volume on RST (road surface temperature) in Dibrugarh city of India

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Abstract

The basic objective of the study is to analyze the potential role of traffic and transportation volume on RST (road surface temperature) in the streets of Dibrugarh city. Additionally, the study evaluates the role of meteorological parameters on RST of the city. The experiment is accomplished by field measurement using HTC Non-contact IR thermometer over 11 selected streets of Dibrugarh city of Assam for a period of 4 months (August to November 2019). Diurnally, maximum RST is recorded in the mid-afternoon period (1.30–2.00 pm) in the month August and September. But interestingly, peak RST has been noticed in the late morning phase (11.30–12.00 pm) in the subsequent months of October and November. Seasonally, Monsoon acquires maximum positive growth of RST till mid-afternoon and rapid negative growth in the later periods. But post-monsoon reveals negative growth of RST since morning period. The study also found a varying degree of coefficient of correlation between traffic volume and mean RST. The degree of correlation is found as moderately positive in the morning and afternoon episodes during August. While September encountered moderately positive correlation only during afternoon and weaker towards the later part. Evidently, October maintains moderately strong correlation in the morning and evening sections, whereas stronger positive towards the later periods. And finally, November surprisingly displayed weak positive correlation in the morning periods to negative correlation in the successive episodes. Meteorologically, air temperature and relative humidity evidenced strong correlation with RST. Air temperature and RST accounted for a strong positive correlation with r value of 0.80 and 0.77 in monsoon and post-monsoon season, respectively. While relative humidity dominates strong negative correlation with RST with r value of -0.80 and -0.55 . Therefore, maximum traffic volume with higher air temperature and lower relative humidity is chiefly accountable for development of RST.

Keywords RST · Traffic volume · Air temperature · Relative humidity · Correlation

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Introduction

The study of road surface temperature (RST) in urban areas has become an integral part to deal with the effects and magnitude of urban heat island, especially for surface heat intensity. Furthermore, RST is useful procedure to predict and detect of the spatial pattern of nocturnal RST over an area (Thornes 1991) and developing thermal mapping of the urban areas. Such thermal mapping using RST data were initially used for detection of cold section of the road surface for deicing policies (Chapman and Thornes 2005). Nowadays, thermal mapping is also used as valuable tool for road weather forecasting and in maintenance of winter road (Todeschini et al. 2016). In addition to these, the thermal mapping is also used to spot the distinctiveness of RST distribution on individual routes. The results of such mapping also help to understand the segment differences

of RST, even on the same route. Also, the characteristics of such distribution vary usually depending on the time of day or night as well as the weather condition (Tokunaga and Nishiyama 2009). RST can be collected through road weather station (RWS) and vehicle ambient temperature (VAT) sensors (Yang et al. 2019). However, the collection of RST data using IR thermometer is accurate and reliable. RST changes both diurnally and seasonally, and the variations of RST might also result due to different surface materials present therein. The variations of RST are more noticeable during clear and calm night rather than in windy and cloudy weather (Chapman and Thornes 2005). In an urban environment, a major parcel of land use is occupied by road surface which in recent times have paved the way for comparing the prediction of RST with the observation under four different weather conditions, i.e. sunny, cloudy, overcast, rainy (Fenga and Feng 2012). RST is influenced by several geographical factors such as sky view factor (SVF), land use, altitude, topography, road construction and traffic volume (Chapman et al. 2001). More specifically, RST pattern of an area is altered by surface materials, angle of sunlight along with the traffic density (Neog et al. 2019). Various studies on RST including infinite surface temperature with medium periodic variations of heat conduction have been estimated to determine the maximum RST (Barber 1957). There are two common categories of road surfaces found over the urban streets of India, viz. concrete and asphalt road surface. Asphalt black top road surface becomes much hotter in summer season and sunny days causing intense thermal environment. The asphalt pavements cover a high percentage of the urban area and largely affect the development of the urban heat island phenomenon (Higashiyama et al. 2016). However, in the recent period, the influence of traffic and transportation over RST is getting considerable attention. Vehicles are able to generate huge amount of heat and the process of heat dispersion becomes slower in the areas surrounded by high rise buildings and dense road network (Smoliak et al. 2015; Yuan and Chen 2011). Heavy load of traffic with fast speed of vehicles increases the RST (Liu et al. 2018). There are few studies which encountered volume of Traffic along with pattern of RST and thermal mapping using IR thermography (Prusa 2002; Farmer and Tonkinson 1989; Gustavsson et al. 2001; Parmenter and Thornes 1986; Shao 1990; Zhu et al. 2017; Neog et al. 2021). Furthermore, different types of vehicle, have different influence on RST value which can be portrayed in the form of thermal maps in GIS environment using thermal data (Jamaludin 2012). It is also observed that the studies relating to the diurnal and seasonal pattern of RST and its correlation with traffic volume has either been not ascertained or less addressed, mostly in the cities under tropical climate. Therefore, a wise effort has been put forward to understand and analyse

the variability pattern of RST at different diurnal and seasonal scale and its correlation to traffic volume.

Limitation of thermal mapping

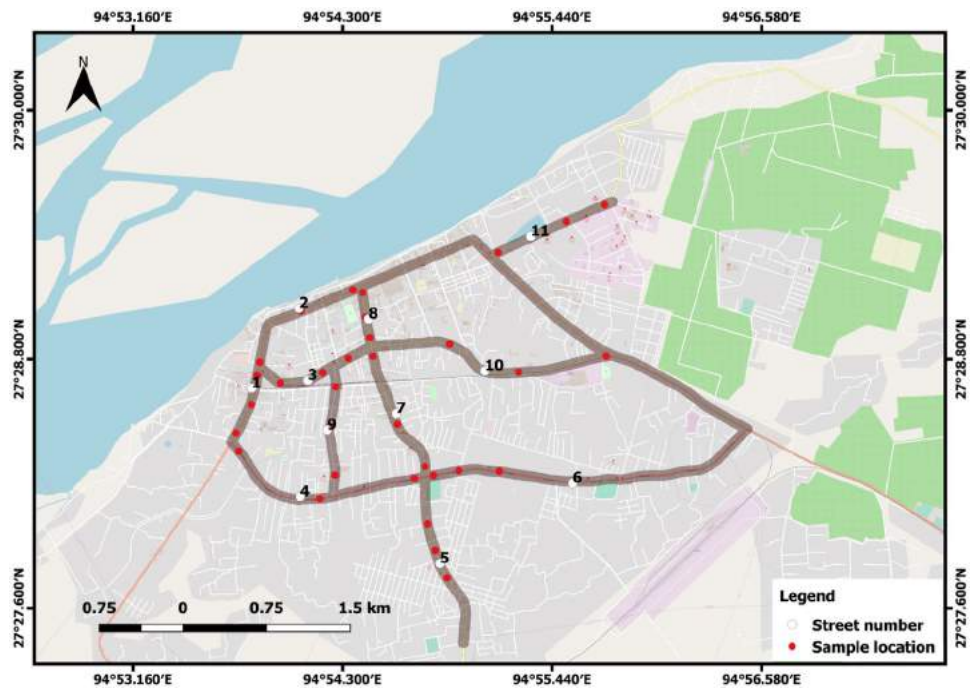
Thornes (1991) detected several random and systematic errors in thermal mapping of RST related to instrument and road surface. However, additional error of RST can also be ascertained due to different shades of asphalt surface color, surface coverage with dirt and sand particles, and rain and humidity factor in previous period or day, different curvature of the road surface, diverse detection range of the instrument, etc. Apart from these, the angle and distance from the object at which data are being captured also adds to potential errors.

Study area

The study has been demonstrated encircling the Dibrugarh urban agglomeration (Fig. 1). The city is situated in the south bank of river Brahmaputra in upper Assam (Neog et al. 2020). The city agglomeration accommodates a population size of 154,296, while the Municipality area with a total population of 138,661 (census of India, 2011) and a total geographical area of 1550 hectares distributed over 22 nos. of municipal wards. The city is located at an altitude of 104 m above the mean sea level, approximately 340 km away eastward from the Guwahati metropolitan in Assam. The city enjoys tropical monsoon climate with maximum mean temperature of 27.9 °C in the month of August and minimum mean temperature of 16.2 °C in the month of January.

Materials and methods

The experiment has been carried out using HTC MT4 non-contact Infra Red Thermometer over 11 major streets of Dibrugarh city. Three sample locations in a single street have been considered for study incorporating average of three reading at each of these locations to maximize accuracy of the study. Therefore, a total 33 sample locations were considered for selected 11 urban streets. The number, location and name of the selected streets of the Dibrugarh city are depicted in Fig. 1 and Table 1. The reading has been made at a distance of 30 cm from each targeted locations over asphalt surface. The emissivity value of the IR Thermometer has been calibrated as 0.93 for all locations. The data have been collected for 12 days, considering 3 days for each month. The study covered both monsoon (i.e. the month of August and September) and post-monsoon season (i.e. the month of October and November). Moreover, to address diurnal pattern, the study is further subdivided into six time frames, i.e. 9.30–10 am, 11.30–12 pm, 1.30–2 pm,

Fig. 1 Location map of the study area**Table 1** Name of the streets, Dibrugarh town, 2019

Street number	Name of the street	Location
1	Amolapatty to Kalibari Road	Urban
2	Kalibari to Phoolbagan	Urban
3	Kalibari to Thana Chariali	Urban
4	Amolapatty to Chowkidingee	Urban
5	Chowkidingee to Milan Nagar	Sub-Urban
6	Chowkidingee to Boiragimoth	Urban
7	Chowkidingee to Thana Chariali	Urban
8	Thana Chariali to Phoolbagan	Urban
9	P.N. Road to Santipara	Urban
10	Thana Chariali to Naliapool	Urban
11	Graham Bazar to Paltan Bazar	Urban

3.30–4 pm, 5.30–6 pm and 7.30–8 pm. The coordinates of the location is accessed by Garmin Etrex 30 Handheld GPS. The mean temperature of three locations for each road/street is considered for final analysis of the thermal data. Similarly, at the same time frames, the volume of Traffic movement (aggregate movement of two, three, four wheelers and others) over the selected streets/roads has been measured using video recording. Additionally, air temperature and relative humidity condition of the study area during the selected days and time frame is collected using Microlite Data Logger with celebrated record interval of 1 min. The accuracy of the HTC MT4 IR Thermometer is $\pm 2^\circ\text{C}$ and resolution is 0.1°C within the temperature range of -30 to 550°C (Neog et al. 2020). Accuracy of Microlite Data logger is 0.3°C for

air temperature and 2% for relative humidity. While the resolution of Data logger is 0.1°C for air temperature and 0.1% for relative humidity. The RST (road surface temperature) data have been correlated individually with traffic volume to analyze the impact of traffic volume over RST. Additionally, air temperature and relative humidity is individually correlated with RST to portray the impact of these variables upon the dynamics of RST. The spatio-temporal nature of RST over the study area is displayed in thermal maps developed using IDW method in QGIS. Finally, the validation of field data has been done with power data access viewer of NASA [POWER Data Access Viewer (nasa.gov)] for the selected days. The description of methodology is represented in Fig. 2.

Results and analysis

Validation of the data

The collected primary data have been validated by correlation with different surface temperature and meteorological data from official sources of nasa.gov. The climatological data such as Thermal Infra Red Radiative flux (TIR), Earth skin surface temperature (TS), and air temperature up to 2 m (AT2M) including relative humidity up to 2 m (RH2M) have been accessed from the power data access viewer of NASA [(POWER Data Access Viewer (nasa.gov))] for a total of 12 days selected over the study area. The data acquired from the official source of NASA have been individually

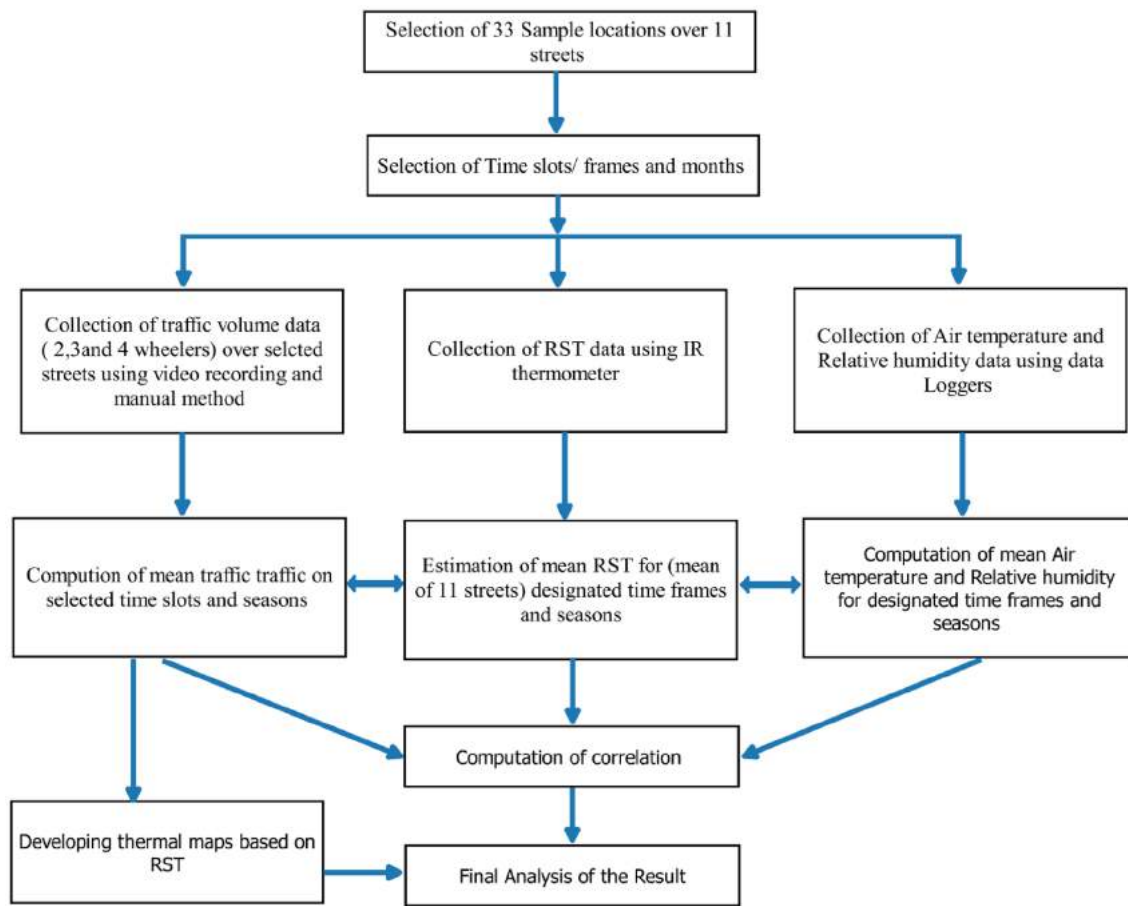


Fig. 2 Flow chart of the methodology

correlated with field surveyed data. The results have shown a very high positive correlation between TIR and RST, RST and TS and AT2M and air temperature with r value of 0.91, 0.98 and 0.97 and comparatively low positive correlation between relative humidity and RH2M with r value of 0.36, respectively. The nature of relationship between data already stated above is represented in the form of scatter plot in Fig. 3.

Diurnal pattern of road surface temperature

Diurnal pattern of road surface temperature (RST) over the city is estimated for the month of August, September, October and November (Tables 2, 3, 4 and 5). Mean RST is calculated for pre-defined time frame considering the RST of selected roads/streets of the city. Interestingly, at diurnal scale peak RST (considering mean RST of all roads) is recorded during 1.30 pm in the month of August and September and 11.30 during the month of October and November. Thus, slight shift of peak RST is noticed from afternoon to morning time. Though, minimum RST is more profound at 7.30 pm during each month. While in case of

range of temperature (considering the maximum and minimum RST during the selected time slot) for the month of August showed a maximum range followed by October, September and December with 18.73 °C, 17.96 °C, 17.58 °C and 13.87 °C, respectively.

As per the rate of RST change during the mentioned time frames, a sharp increment of RST is noticed during the period of 9.30–11.30 am with maximum change or increase in the month of August with 6.10 °C with considerable decline in the succeeding month of September, October and November accounting for 3.31 °C, 3.02 °C and 1.74 °C, respectively. Apart from the study produced, it is noticed that stable RST is noticed during the selected time slot from 11.30 am to 1.30 pm in the month of August with a very insignificant change of 0.01 °C, followed by remarkable increment of RST during September and surprisingly declining trend in October and November with RST of 1.12 °C, – 1.31 °C and – 0.53 °C, respectively. While the remaining selected time slots i.e. 1.30–3.30 pm, 3.30–5.30 pm and 5.30–7.30 pm portrayed declining trend of RST with quite similar rate of change. Moreover, while analyzing and correlating the standard deviation (SD) and coefficient

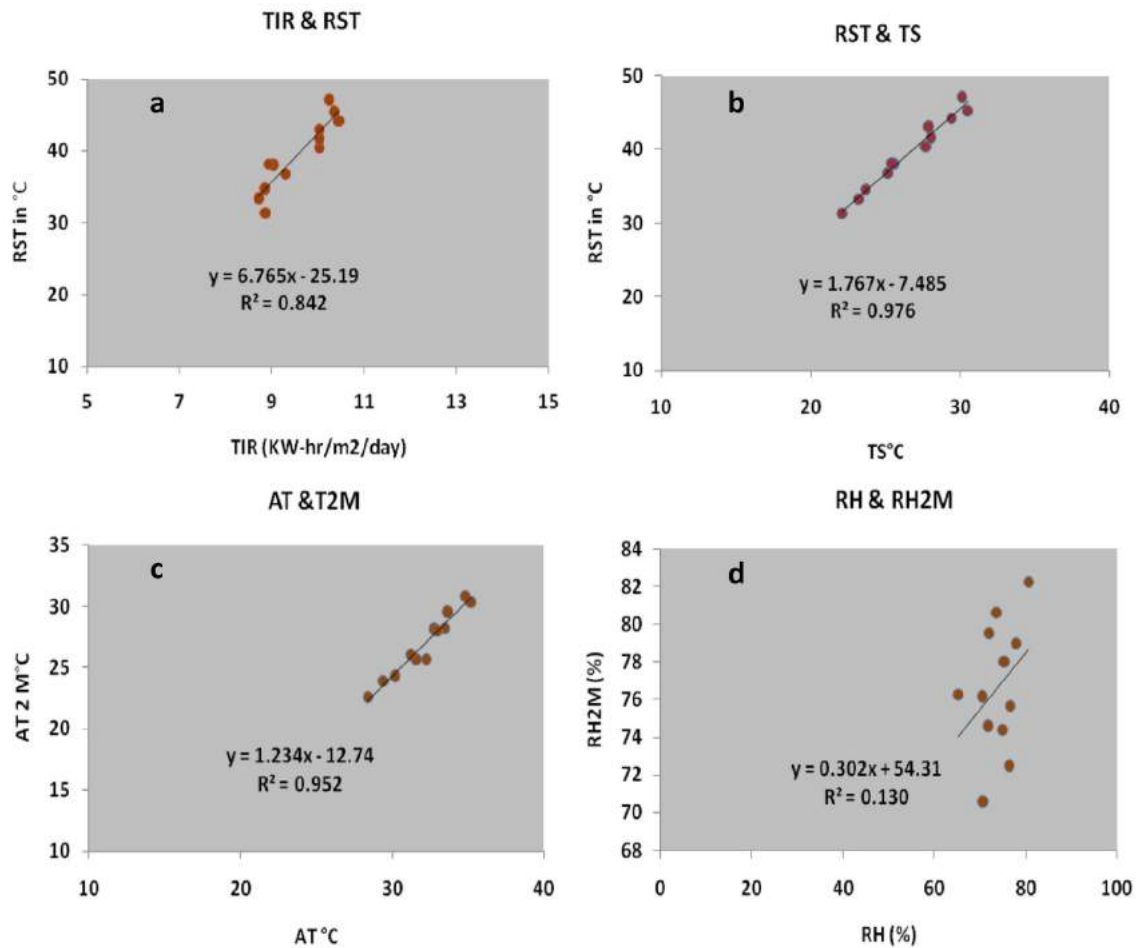


Fig. 3 Scatter plot showing relationship between different parameters. **a** Thermal Infra Red Radiative flux (TIR) and RST, **b** RST and TS (Earth skin surface temperature), **c** air temperature (AT) and air

temperature up to 2 m (T2M), **d** relative humidity (RH) and relative humidity up to 2 m (RH2M)

Table 2 Diurnal variation of RST over different road in Dibrugarh city, August 2019

Road/street no	Time/temperature in °C					
	9.30 am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	49.02	53.48	55.22	46.01	35.9	33.32
2	47.4	53.72	53.56	44.04	36.7	34.32
3	53.84	61.29	59.56	52.68	40.47	36.77
4	46.11	51.55	52.49	47.62	39.90	36.81
5	45.86	50.15	47.39	43.50	33.80	32.75
6	43.51	49.85	50.32	44.36	35.34	33.68
7	49.12	55.92	53.64	47.74	37.28	34.8
8	48.93	54.14	54.61	48.70	37.47	34.89
9	44.39	52.54	54.13	45.11	36.01	34.34
10	48.09	55.27	55.45	49.05	40.43	37.13
11	45.4	50.82	52.51	44.32	36.47	33.97
Mean	47.42	53.52	53.53	46.65	37.25	34.80
SD	2.87	3.26	3.08	2.80	2.18	1.49
CV	6.04	6.10	5.74	6.01	5.84	4.28

Table 3 Diurnal variation of RST over different road in Dibrugarh city, September 2019

Road/street no	Time/temperature in °C					
	9.30 am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	44.31	50.78	50.96	41.1	32.83	30.9
2	46.33	49.95	52.52	41.30	34.35	32.19
3	47.46	34.86	53.86	43.76	32.26	33.41
4	43.37	48.19	48.96	42.73	35.69	33.38
5	42.95	46.85	40.61	35.74	35.45	31.9
6	38.93	47.03	46.64	36.48	30.10	29.18
7	47.73	51.41	50.29	40.95	31.78	30.15
8	46.34	52.01	51.16	39.40	34.68	31.1
9	42.2	49.38	48.1	39.77	33.18	31.24
10	49.55	52.57	51.17	44.48	35.80	33.48
11	43.81	46.4	47.5	39.88	33.64	31.43
Mean	44.82	48.13	49.25	40.51	33.61	31.67
SD	3.01	4.89	3.59	2.71	1.80	1.39
CV	6.73	10.17	7.30	6.70	5.36	4.38

Table 4 Diurnal variation of RST over different road in Dibrugarh city, October 2019

Road/street no	Time/temperature in °C					
	9.30 am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	45.18	47	44.41	35.19	30.84	27.44
2	44.14	47.66	46.33	38.36	31.43	29.16
3	45.03	50.39	49.78	39.07	32.83	30.13
4	41.72	42.88	44.15	36.5	31.37	26.73
5	39.18	43.39	39.39	29.68	27.82	26.42
6	40.71	41.16	38.73	30.6	27.22	25.88
7	43.24	47.04	44.42	33.7	29.68	27.53
8	44.53	50.03	46.93	33.68	29.18	27.31
9	39.62	44.02	44.86	31.87	29.54	28.06
10	47.74	48.14	47.58	36.78	32	29.64
11	39.87	42.52	43.24	35.79	30.67	28.37
Mean	42.81	45.84	44.53	34.66	30.23	27.88
SD	2.78	3.17	3.28	3.06	1.73	1.35
CV	6.50	6.92	7.38	8.82	5.72	4.83

of variability (CV) of RST (considering mean RST of all roads), maximum relation strength is observed during 11.30 am in all months except for the month of October. Whereas minimum is detected during the time frame 7.30 pm for all month (Tables 2, 3, 4 and 5). The spatial pattern of RST over different time frames is depicted in the Figs. 4, 5, 6 and 7.

Seasonal pattern of RST

On seasonal basis, a comparison has been made between monsoon and post-monsoon to portray RST (Tables 6 and 7). During monsoon season, peak RST is noticed at 1.30 pm while lowest at 7.30 pm with RST of 51.22 °C and 33.34 °C, respectively. But on the other hand, post-monsoon depicted quite different picture with maximum and minimum RST

for the time frame 11.30 am and 7.30 pm at 42.24 °C and 26.52 °C correspondingly. Similarly, the rate of RST change between the mentioned time frames also exhibited a different scenario seasonally. The rate of change exhibited rapid increment with 4.58 °C during 9.30–11.30 am with subsequently meager rise of 0.53 °C during the period of 11.30 am to 1.30 pm in the monsoon season. At the same time, relatively gradual increment at 2.18 °C is observed between 9.30 and 11.30 am followed by subsequent diminishing rate with –0.71 °C in the post-monsoon season, respectively. Thus, rate of change of RST (between diurnal slots) was quite rapid and mostly positive till early afternoon period (till 1.30 pm) in monsoon season with mean rate of 2.55 °C due to intense sunlight and high temperature and while it is only 0.73 in post-monsoonal period. While taking into account

Table 5 Diurnal variation of RST over different road in Dibrugarh city, November 2019

Road/street no	Time/temperature in °C					
	9.30 am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	37.43	41.36	38.79	30.79	26.3	27.66
2	37.55	32.1	40.54	33.65	27.71	24.87
3	38.51	42.39	39.66	33.31	28.79	24.37
4	36.4	38.98	39.32	29.94	26.97	26.77
5	36.18	38.03	39.12	27.63	25.07	23.69
6	34.29	34.01	31.6	26.46	23.57	22.43
7	37.93	40.93	36.07	29.27	25.07	22.76
8	40.24	41.24	40.48	29.72	26.58	24.15
9	34.75	38.29	37.71	28.40	25.95	25.07
10	42	43.23	40.43	31.80	28.05	25.86
11	35.09	38.98	39.97	34.07	32.4	29.38
Mean	37.31	39.05	38.52	30.46	26.95	25.18
SD	2.35	3.43	2.66	2.52	2.34	2.10
CV	6.30	8.78	6.90	8.29	8.70	8.35

the succeeding time slots (i.e. from 3.30 to 7.30 pm) for both monsoon and post-monsoon season showed rapid mean rate of decline at -5.96 °C for the former and at -5.0 °C for the later season. However, the overall mean rate of change of RST for time slot from 9.30 am to 7.30 pm is observed as -2.55 for monsoon and -2.77 for post-monsoonal season. This signifies dominance of both higher positive and higher negative growth of RST at before noon and afternoon session in the monsoon season, becoming quite gradual than post-monsoon. Overall mean RST of the city (considering mean of all time and roads) during monsoon is 43.45 °C and post-monsoon is 35.36 °C. The distributional pattern of RST over different time and seasons are represented in Fig. 8.

Impact of traffic and transportation over RST

The influence of traffic over RST is analyzed through inclusion of the method—coefficient of correlation and scatter plot. The relationship is examined for all diurnal sets of the selected months. The results suggested quite dissimilar pattern. The correlations are quite stronger in the morning as well afternoon session in the month of August with r value of 0.48, 0.40, 0.38 and 0.40 during 9.30 am, 11.30 am, 1.30 pm and 3.30 pm, respectively. However, correlation seems to be weak in the early and late evening period with r value of 0.18 and 0.23 during 5.30 pm and 7.30 pm. While, a different scenario is observed for the month of September portraying relatively weaker correlation between traffic volume and RST particularly in the morning session with r value of 0.30 and 0.18 at 9.30 am and 11.30 am, leaving apart moderately stronger correlation during the afternoon period with r value of 0.45 and 0.49, followed by again weaker trend in the early and late evening period supported by r value of 0.11 and 0.25, respectively. For the month of

October, it is correlated low to moderately positive during morning and afternoon with r value of 0.26, 0.56, 0.42 and 0.34 at the same time slot whereas strongly correlated in the evening with r value of 0.82 and 0.73 at 5.30 pm and 7.30 pm, respectively. The month of November witnessed a weaker correlation in the morning epoch with r value of 0.37 and 0.22 and negative correlation in early afternoon and evening period with r value of -0.32 , -0.38 and -0.38 at 1.30 pm, 5.30 pm and 7.30 pm followed by low positive correlation with r value of 0.31 during 3.30 pm. The overall estimation points out that there are moderate positive correlation between mean traffic volume and mean RST in the month of August, September and October with r value of 0.56, 0.60 and 0.51 alongside a very weak positive correlation witnessed by r value of 0.11 in the month of November. Furthermore, the monsoon season overall showed weaker positive correlation than post-monsoonal season in terms of mean traffic volume and RST asserted by r value of 0.54 and 0.68, respectively. While considering mean volume of the traffic for selected 12 days (considering mean traffic of two, three and four wheeler at the designate day) is correlated to mean RST. The results appeared as positively strong relation in almost all days except day 1 and 2, where r value is negative with -0.52 and -0.36 and weakly positive in day 4 and day 6 with r value of 0.31 and 0.22, respectively.

Types of traffic and its impact of RST

The influence of different classes of traffic volume has been individually correlated with RST for selected time and month (Table 8). The results revealed were quite dynamic in terms of two-wheeler, three-wheeler and four-wheeler traffic volume including its influence over the RST development in varied temporal direction. In terms of two

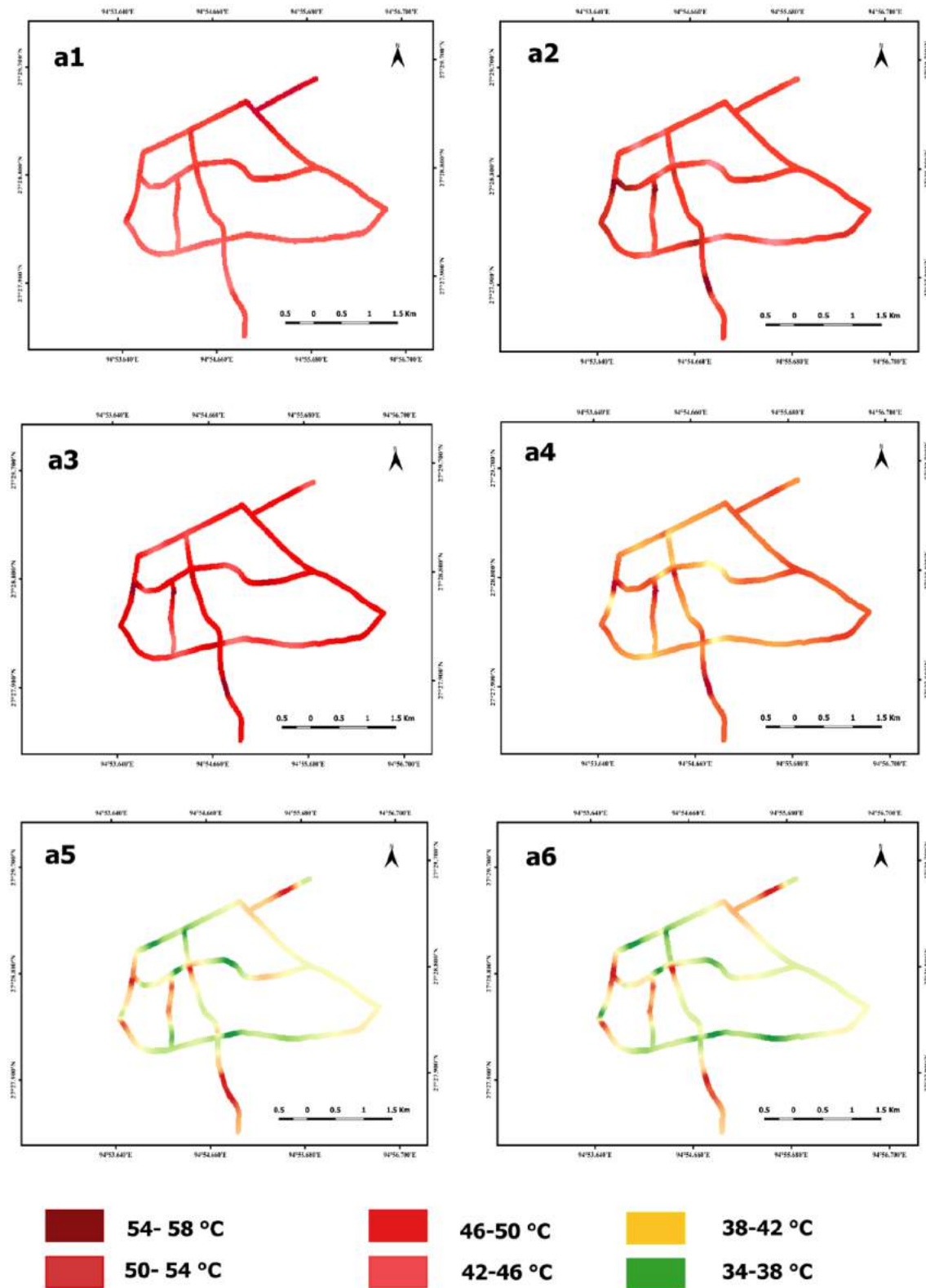


Fig. 4 Spatio-temporal pattern of RST (road surface temperature) in August, Dibrugarh, 2019 (a—August, 1=9.30–10 am, 2=11.30–12 pm, 3=1.30–2 pm, 4=3.30–4 pm, 5=5.30–6 pm, 6=7.30–8 pm)

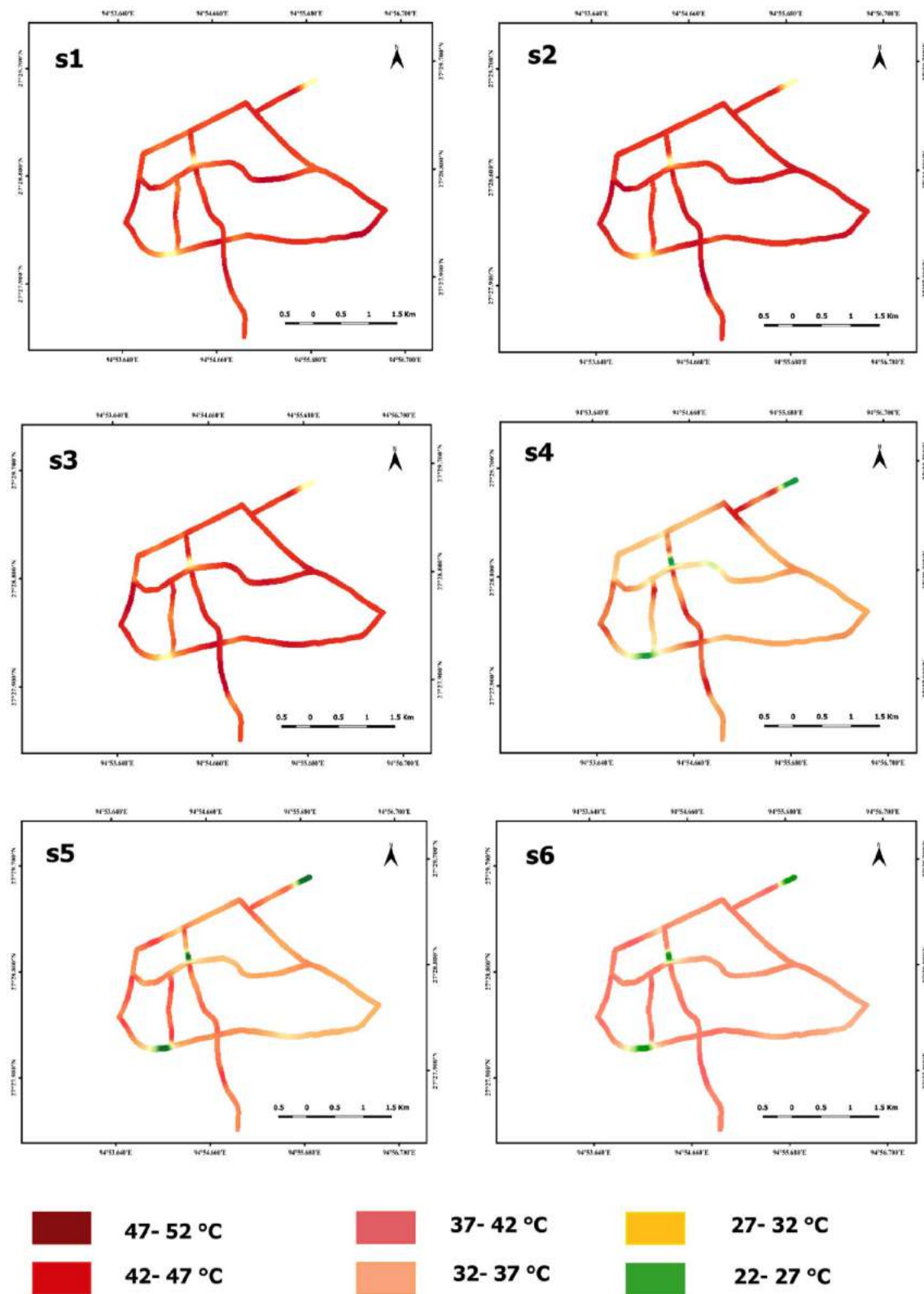


Fig. 5 Spatio-temporal pattern of RST (road surface temperature) in September, Dibrugarh, 2019 (s—September, 1=9.30–10 am, 2=11.30–12 pm, 3=1.30–2 pm, 4=3.30–4 pm, 5=5.30–6 pm, 6=7.30–8 pm)

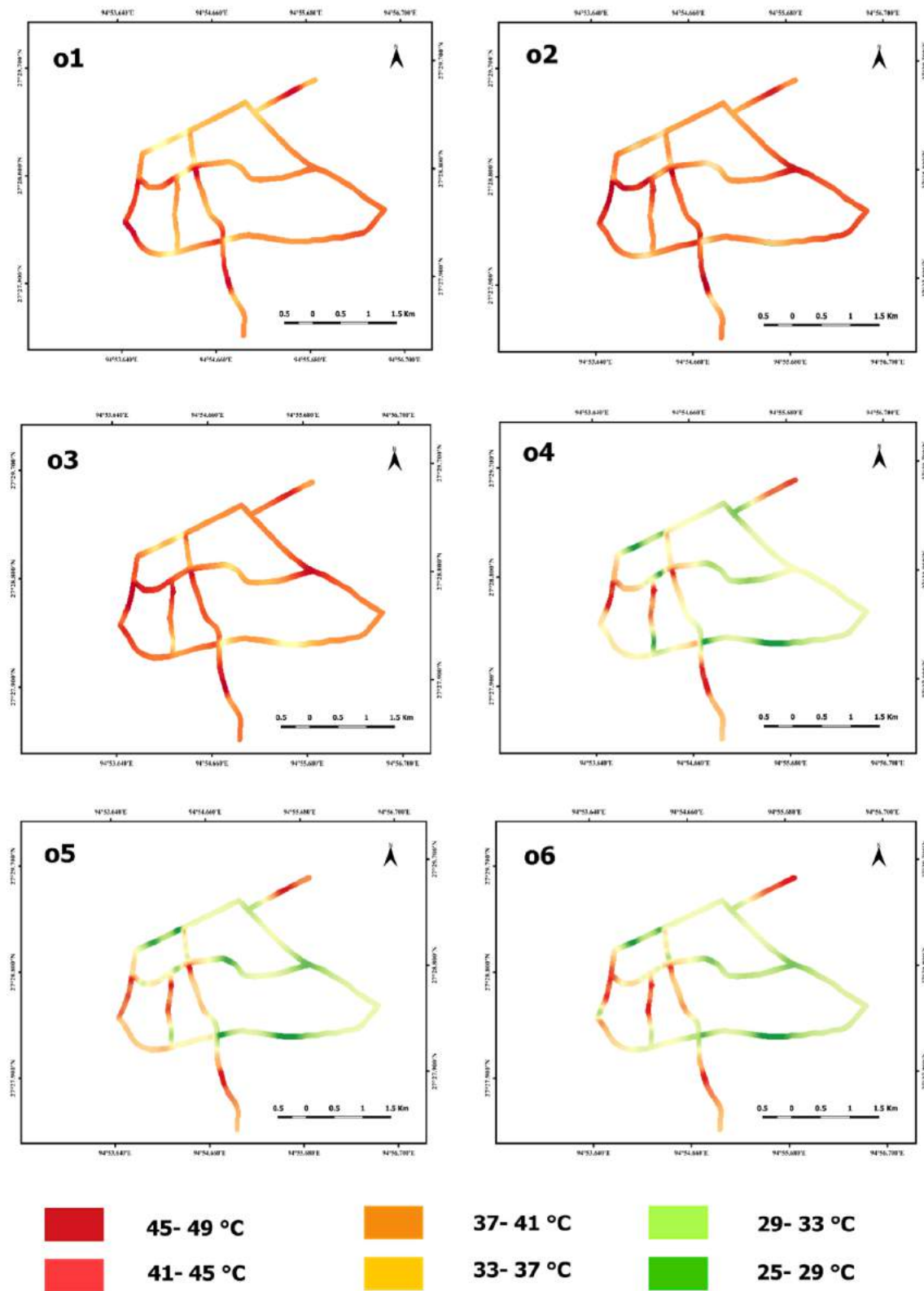


Fig. 6 Spatio-temporal pattern of RST (road surface temperature) in October, Dibrugarh, 2019 (o—October, 1=9.30–10 am, 2=11.30–12 pm, 3=1.30–2 pm, 4=3.30–4 pm, 5=5.30–6 pm, 6=7.30–8 pm)

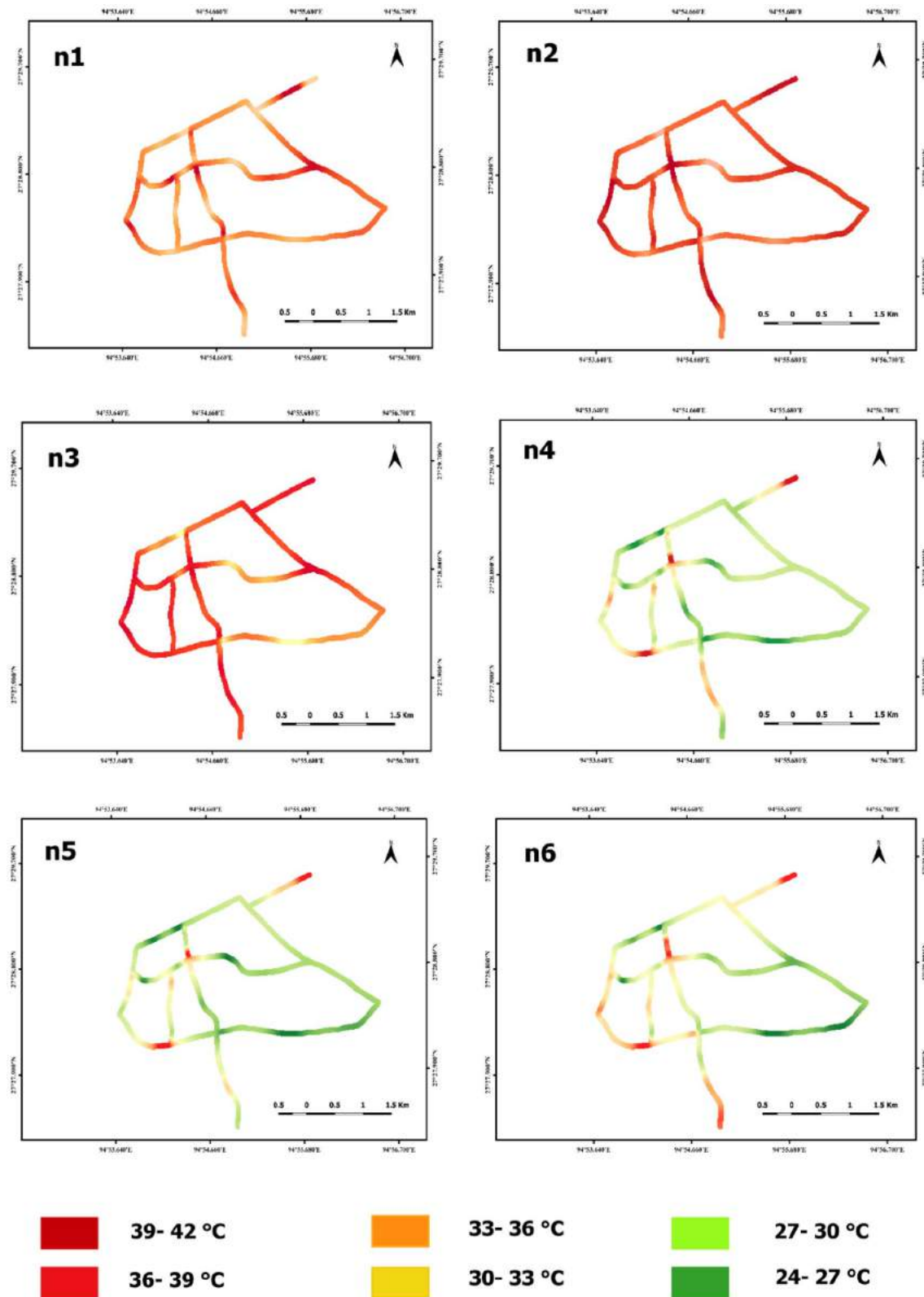


Fig. 7 Spatio-temporal pattern of RST (road surface temperature) in November, Dibrugarh, 2019 (n—August, 1=9.30–10 am, 2=11.30–12 pm, 3=1.30–2 pm, 4=3.30–4 pm, 5=5.30–6 pm, 6=7.30–8 pm)

Table 6 Pattern of RST (road surface temperature) over different roads in Dibrugarh city, Monsoon Season, 2019

Road/street no	Time/temperature in °C					
	9.30 am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	46.66	52.13	53.09	43.55	34.36	32.11
2	46.85	51.83	53.04	42.67	35.52	33.25
3	50.65	48.07	56.71	48.22	36.36	35.09
4	44.74	49.87	50.72	45.17	37.79	35.09
5	44.4	48.5	44	39.62	34.62	32.32
6	41.22	48.44	48.48	40.42	32.72	31.43
7	48.42	53.66	51.96	44.34	34.53	32.47
8	47.63	53.07	52.88	44.05	36.07	32.99
9	43.29	50.96	51.11	42.44	34.59	32.79
10	48.82	53.92	53.31	46.76	40.11	35.3
11	44.6	48.61	50	42.10	35.05	32.7
Mean	46.12	50.69	51.22	43.58	35.74	33.34
SD	2.89	2.31	3.37	2.69	2.04	1.34
CV	6.26	4.56	6.59	6.16	5.71	4.03

Table 7 Pattern of RST (road surface temperature) over different roads in Dibrugarh city, post-monsoon season, 2019

Road/street no	Time/temperature in °C					
	9. am	11.30 am	1.30 pm	3.30 pm	5.30 pm	7.30 pm
1	41.30	44.18	41.6	32.99	28.57	27.55
2	40.84	39.88	43.41	36.00	29.57	27.01
3	41.77	46.39	44.72	36.19	30.81	27.25
4	39.06	40.93	41.73	33.22	29.17	26.75
5	37.68	40.71	39.35	28.64	26.44	25.05
6	37.5	37.80	35.16	28.53	25.39	24.15
7	40.58	41.55	40.24	31.48	28.13	25.14
8	42.38	45.63	43.7	31.70	27.88	25.73
9	37.18	41.15	41.28	30.13	27.74	26.56
10	44.87	45.68	44	34.29	30.03	27.75
11	37.48	40.75	41.6	34.93	31.53	28.83
Mean	40.06	42.24	41.53	32.55	28.66	26.52
SD	2.49	2.78	2.68	2.71	1.82	1.38
CV	6.22	6.59	6.44	8.34	6.36	5.20

wheeler, the correlation seems to be stronger mostly in the morning, noon and afternoon section (9.30–10 am, 11.30–12 pm, 1.30–2 pm and 3.30–4 pm) while weaker in the later periods for almost all month. Similarly, three wheeler also witnessed similar pattern almost for all the month except for the month of august, which depicted maximum correlation in the noon and afternoon period. Contrary four-wheeler traffic demarcates a dissimilar pattern by incorporating stronger correlation particularly in the morning, noon and late afternoon section (i.e. 9.30–10 am, 11.30–12 pm and 5.30–6 pm) for all selected months. The distributional pattern of traffic in the Dibrugarh city in different roads and time slots are represented in the Fig. 9.

Influence of air temperature and relative humidity on RST

Air temperature and relative humidity play an important role in modifying as well as understanding the RST. The air temperature is strongly positive while relative humidity has weaker positive to negative relationship with RST. The relationship is analyzed for monthly, seasonal and diurnal pattern. Diurnal pattern of relationship is examined by considering the day wise mean air temperature, relative humidity and RST fragmented in the pre-defined time slots. Diurnal air temperature has a very strong positive correlation with RST with computed r value of 0.92, 0.94, 0.96, 0.95, 0.96 and 0.94 for the selected time frames, respectively. While relative humidity seems

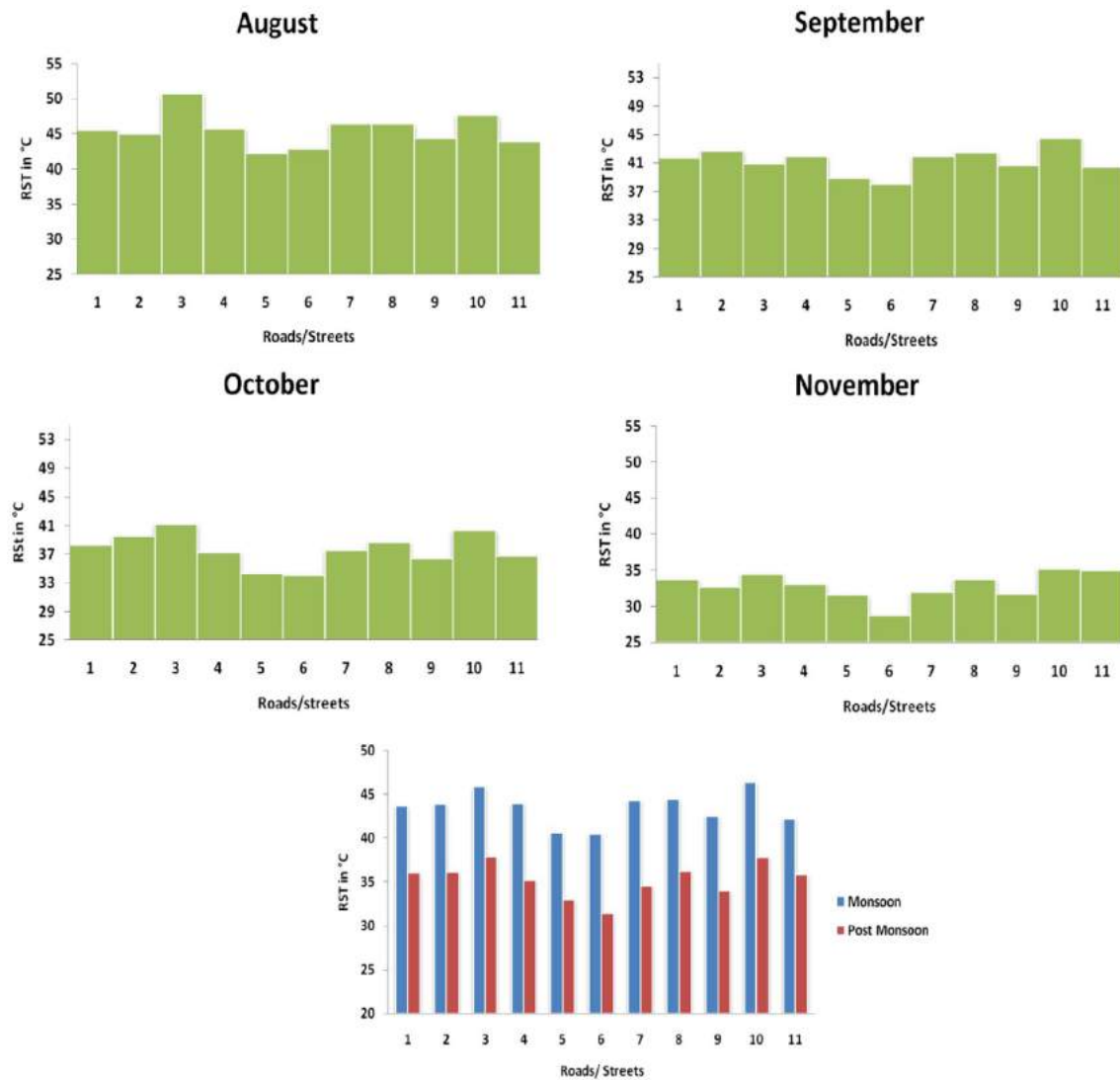


Fig. 8 Monthly and seasonal pattern of mean RST (road surface temperature) in different streets of Dibrugarh, 2019

Table 8 Correlation of two-wheeler, three-wheeler and four-wheeler traffic with RST for all month, Dibrugarh, 2019

Time	August			September			October			November		
	2 W	3 W	4 W	2 W	3 W	4 W	2 W	3 W	4 W	2 W	3 W	4 W
9.30–10 am	0.14	0.37	0.29	0.50	0.47	0.21	0.41	0.21	0.25	0.58	0.49	0.23
11.30–12 pm	0.33	0.23	0.03	0.08	−0.18	0.15	0.61	0.47	0.41	0.65	0.49	0.25
1.30–2 pm	0.34	0.11	−0.05	0.04	−0.04	0.04	0.34	0.23	−0.05	0.22	0.31	0.27
3.30–4 pm	0.72	0.46	0.15	0.28	−0.05	0.30	0.15	0.07	0.34	0.13	0.10	0.16
5.30–6 pm	0.13	0.15	0.01	0.22	0.08	0.05	0.31	0.10	0.28	−0.13	0.23	−0.07
7.30–8 pm	0.54	0.15	0.27	0.31	0.07	0.11	0.24	−0.06	0.01	−0.27	−0.11	−0.13

W wheeler

to be less dominating for RST modification with r value of -0.15 in the early morning, whereas 0.25 , 0.06 , 0.50 in the succeeding time slots and quite interestingly moderately negative with r value of -0.55 and -0.53 in the early and late

evening stage. The presence of both low positive and negative r value demonstrate no regular trend of correlation between relative humidity and RST. Thus, proclaimed dominant role of air temperature with weaker role of relative humidity in

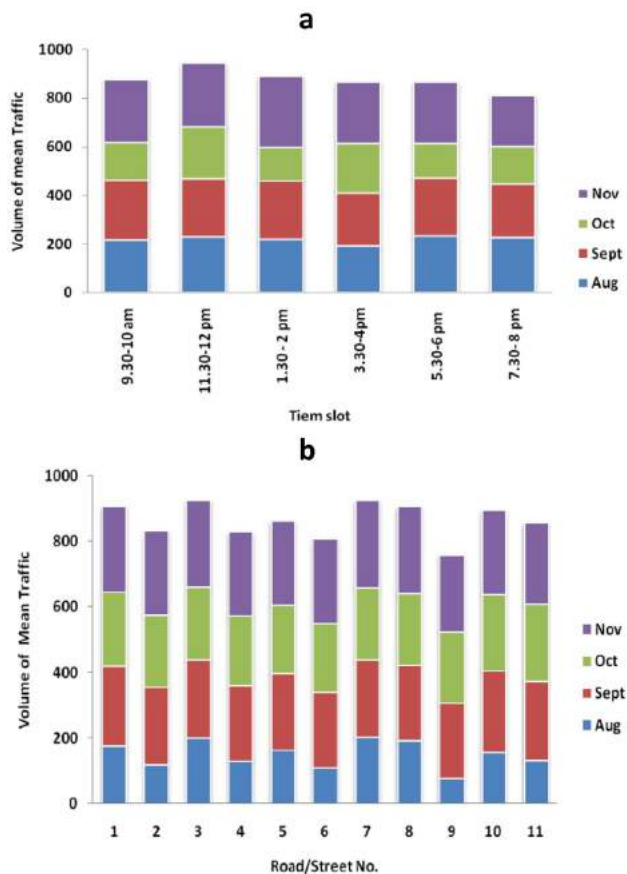


Fig. 9 Volume of traffic in different streets of Dibrugarh city, 2019 (**a** volume of mean traffic at different time slot, **b** volume of mean traffic at different roads/streets)

alteration of RST mostly in its diurnal form where monthly pattern revealed a little different scenario with moderately strong positive correlation between air temperature and RST in August and November with computed r value of 0.67 and 0.73 and strong correlation in September and October month supported by r value of 0.82 and 0.84, respectively. But surprisingly strong negative correlation is witnessed between relative humidity and RST during the aforesaid month chronologically with r value -0.64 , -0.36 , -0.80 and -0.78 accordingly. While seasonally, in post-monsoon period, strong correlation is acknowledged between air temperature, relative humidity with RST at r value of 0.80 and -0.80 , whereas moderately strong correlation is accredited to monsoon season with r value of 0.77 and -0.55 , respectively.

Discussion and conclusion

The study finally witnessed an influencing role of traffic volume and count on the alteration of RST. But there seems to be significant variations in pattern of influence

of different parameters such as traffic volume, air temperature and relative humidity on RST. Considering the nature of dynamics of RST, there is no regular pattern is noticed in the selected time frames for study months and season except for higher rate of change of RST in the morning session during August and slowly diminishing trend for rest of the months. One of the remarkable differences is noticed in terms of peak RST, which acquired its position in the afternoon time (1.30–2.00 pm) in the monsoon season, whereas before noon (11.30–12.00 pm) time in the post-monsoon season. This is the possible outcome of duration and angle of sunlight on the road surface. Considering the impact of traffic on RST, it has been noticed that the traffic seems to quite governing on morning time during August, afternoon in September and October and finally less effective in November. This evidenced that impact of traffic volume on RST is more on summer, related highly to the intensity of sunlight. Furthermore, the type of traffic also considered to be one of the major factors in dynamics of RST. The two-wheeler vehicles are accounted as more leading on RST rather than three and four wheelers. Thus, overall study incorporated the true nature of RST modification with respect to traffic volume along with air temperature and humidity. It is a fact that appreciable change of RST brings a significant change in the process of urban heat island in a city. The air temperature and humidity always have a considerable influence over RST variability. Nevertheless, the impact of traffic volume and its different type on the alteration of RST development in a city cannot be overlooked. But the observations showed that the impact of traffic and transportation on RST varies with respect to the time as well as seasons. Thus, for an urban planner while dealing with the issue of urban heat more particularly while taking into account the surface urban heat island intensity must also consider the dynamics of RST in the city and its correlation with traffic volume and its types. However, to reduce the intensification of RST, the improvement of green land parcels in alongside the streets as well as in the centerline of the city road is must. The surface urban heating process can be neutralized only through cooling and shading method by incorporation of green areas.

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Declarations

Conflict of interest The authors of the manuscript declare no conflict of interest.

References

- Barber ES (1957) Calculation of maximum pavement temperatures from weather reports. Highway Research Board, Bulletin 168, National Research Council, Washington DC
- Chapman L, Thornes JE (2005) The influence of traffic on road surface temperatures: implications for thermal mapping studies. *Meteorol Appl* 12(4):371–380. <https://doi.org/10.1017/S1350482705001957>
- Chapman L et al (2001) Statistical modeling of road surface temperatures from a geographical parameter database. *Meteorol Appl* 8(4):409–419
- Farmer SF, Tonkinson PJ (1989) Road surface temperature model verification using input data from airfields, roadside sites and the mesoscale model. UK Meteorological Office, Exeter
- Fenga T, Feng S (2012) A Numerical model for predicting road surface temperature in the highway. *Procedia Eng* 37:137–142. <https://doi.org/10.1016/j.proeng.2012.04.216>
- Gustavsson T et al (2001) Road climate in cities: a study of the Stockholm Area, South East Sweden. *Meteorol Appl* 8:481–489. <https://doi.org/10.1017/S1350482701004091>
- Higashiyama H et al (2016) Field measurements of road surface temperature of several asphalt pavements with temperature rise reducing function. *Case Stud Constr Mater* 4(6):73–80. <https://doi.org/10.1016/j.cscm.2016.01.001>
- Jamaludin J (2012) Influence of traffic and transportation characteristics over road surface temperature (RST): Dissertation; Transportation Planning, Faculty of Built Environment, UTM
- Liu B et al (2018) Comparison of algorithms for road surface temperature prediction. *Int J Crowd Sci* 2(3):212–224. <https://doi.org/10.1108/IJCS-09-2018-0021>
- Neog R et al (2019) Evaluation of Spatio-temporal pattern of surface urban heat island phenomena at Jorhat, India. *Arab J Geosci* 12(10):316. <https://doi.org/10.1007/s12517-019-4484-z>
- Neog R et al (2020) An infrared thermography-based study on the variation in diurnal and seasonal land surface temperature at Dibrugarh city, India. *Model Earth Syst Environ* 6:2047–2061. <https://doi.org/10.1007/s40808-020-00772-3>
- Neog R et al (2021) Spatiotemporal analysis of road surface temperature (RST) and building wall temperature (BWT) and its relation to the traffic volume at Jorhat urban environment, India. *Environ Dev Sustain* 23(7):10080–10092. <https://doi.org/10.1007/s10668-020-01047-8>
- Parmenter BS, Thornes JE (1986) The use of a computer model to predict the formation of ice on road surfaces. *Transp Road Res Lab Res Rep* 1:1–19
- Prusa JM (2002) Conceptual and scaling evaluation of vehicle traffic thermal effects on snow/ice covered roads. *J Appl Meteorol* 41:1225–1240. [https://doi.org/10.1175/1520-0450\(2002\)041%3c1225:CASEOV%3e2.0.CO;2](https://doi.org/10.1175/1520-0450(2002)041%3c1225:CASEOV%3e2.0.CO;2)
- Shao J (1990) A winter road surface temperature model with comparison to others. Unpublished PhD thesis, University of Birmingham, UK
- Smoliak BV et al (2015) Dense network observations of the Twin Cities canopy-layer urban heat island. *J Appl Meteorol Climatol* 54(9):1899–1917. <https://doi.org/10.1175/JAMC-D-14-0239.1>
- Thornes JE (1991) Thermal mapping and road-weather information systems for highway engineers. In: Perry AH, Symons LJ (eds) *Highway meteorology*. E & FN Spon, London, pp 39–67
- Todeschini I et al (2016) Thermal mapping as a valuable tool for road weather forecast and winter road maintenance: an example from the Italian Alps. In: Fourth international conference on remote sensing and geoinformation of the environment (RSCy2016), 9688. <https://doi.org/10.1117/12.2240484>
- Tokunaga R, Nishiyama N (2009) A method for predicting road surface temperature distribution using Pasquill stability classes 1; Corpus ID: 168166991
- Yang C et al (2019) Estimation road surface temperature variation using commercial vehicle ambient sensor. *IOP Conf Ser Mater Sci Eng* 603:022027
- Yuan C, Chen L (2011) Mitigating urban heat island effects in high density cities based on sky view factor and urban morphological understanding: a study of Hong Kong. *Archit Sci Rev* 54:305–315. <https://doi.org/10.1080/00038628.2011.613644>
- Zhu R et al (2017) Understanding Heat pattern produced by produced by vehicular flows in urban areas. *Sci Rep* 7:16309. <https://doi.org/10.1038/s41598-017-15869-6>

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SELF RELIANT OR SELF REVERSE: AN EMPIRICAL ANALYSIS OF COVID-19 FINANCIAL STIMULUS IN INDIA

Dr. Trailokya Deka

B.P. Chaliha College, Nagarbera, Kamrup (Assam)

Abstract:

Global economic situation is worst during 2019-2020 due to Covid-19 pandemic. Countries around the world announced 'Covid-19 stimulus package' to recuperate the hit in respective economies. Prime minister of India announced to pay out Rs.20,97,053 crore, which is about 10 percent of India's GDP achieved in 2019-20. India named the special initiative as 'Atma Nirbhar Bharat Abhiyan' or 'Self Reliant India Mission'. Pledged amount is expected to be spent in the domestic economy to make the country India self reliant both in goods and services. Looking into the prospects of global leadership of Indian economy 'Self Reliant Mission' has derived attention from the academicians and policy makers across the countries and regions. Looking into the importance of financial management in pandemic period paper analyzed different monetary consequences of the stimulus and briefly explained the global outlook of the same. With analytical methodological

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Covid-19 and it's Impact on Women: A Case Study of Assam

DR. Trailokya Deka

B.P. Chaliha College, Nagarbera (Kamrup), Assam

Abstract

Current decade is specially marked by the pandemic Covid-19. It has impacted the total socio-economic system of human being from the last part of 2019 starting from China. From nature to nurture everything has changed-improved or damaged due to the impacts of Covid-19 in India. Covid-19 has both positive and negative impacts over the dimensions of the economy. It has impacted across the class, creed, group and boundary of the society. Lakhs of people have died in the disease. Many have lost their parents, near and dear ones due to Covid-19 in the country. Lakhs of people have died in hunger and starvation due to Covid-19 induced declared national or regional lockdowns in the country. Both male and female group of the society have died or suffered due to Covid-19 in the country. Comparatively due to physical characteristics it seems that female group of the society have suffered more than the

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REVIEW



Recent development of modified fluorescent carbon quantum dots-based fluorescence sensors for food quality assessment

Manash Jyoti Deka¹ · Devasish Chowdhury² · Bhabesh Kumar Nath³

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Abstract

Food toxins are regarded as a major source of health risks, serious illnesses susceptible to even death. These dangerous pathogens may lead to significant economic impact worldwide. The food production chain undergoes different stages like harvesting, processing, storage, packaging, distribution, and lastly preparation, and consumption. Therefore, each step is susceptible to risks of environmental contamination. Nowadays, the carbon quantum dots (CDs) are regarded as one of the most widely used hybrid carbon nanomaterials due to their different magical physical and chemical properties. The CDs have a size below 10 nm and show the fluorescent property. The CDs find vast applications in different fields like sensing, food safety, drug delivery, bioimaging, catalyst, energy conversion, etc. Compared to other available methods, the fluorescence detection techniques have low cost, easy handling, and safe operating system. There is a need for a review to compile the fluorescence properties of carbon nanodots used to detect food pathogens. This brief review is addressed in that direction and mostly focused on the synthesis of carbon dots-based fluorescence sensors for detecting pathogens and toxins in foods and beverages. The detailed mechanisms and origin of fluorescence properties of carbon quantum dots are also highlighted herewith.

Keywords Carbon dots (CDs) · Fluorescence · Food toxin · Sensors · Top-down · Bottom-up

Abbreviations

CDs	Carbon dots
CQDs	Carbon quantum dots
GQDs	Graphene quantum dots
PL	Photoluminescence
CPDs	Carbonized polymer dots
PET	Photo-induced electron transfer
RET	Resonance energy transfer

1 Introduction

Food toxin management is nowadays a global food safety issue. These types of toxins may originate from different sources like environment having an organic or inorganic origin and contaminate foods [1]. Some examples are metals such as lead and copper, lead, iron, fluoride mercury, dioxins, bisphenol, polychlorinated biphenyls (PCBs), pesticides, herbicides, food coloring agents, preservatives, etc. Similarly, for some used drugs for people and animals, food packaging methods (migrant leaching) may contaminate water and may cause chronic toxic effects ultimately health hazards to consumers [2]. Toxicity depends on the health condition of individuals, age, dose and exposure cycle of toxin, etc. as well as the individual's susceptibility. There are long processes for getting food like harvesting, processing, storage, packaging, distribution, and lastly preparation, and consumption. Thus, there is a possibility to get contaminated food with pathogens at any stage of the food production process [3]. The human food contamination pathways are schematically shown in Fig. 1.

For food safety management, the most used instruments are chromatography and mass spectrometry like

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REVIEW



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Quantitative documentation of traditionally used medicinal plants and their significance to healthcare among the Mishing community of Northeast India

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Abstract. Mishing community is one of the major tribal communities residing in Northeastern India. They have adapted their lifestyle with one of the adverse conditions and their reliance on plants for food and medicine is widely prevalent. This article presents an explorative ethnobotanical survey on documentation of plants used by the Mishing community of Assam in treating the common ailments as well as their mode of preparation and administration. Research was conducted in eight villages from four districts of Assam. Various participatory interaction methods, group discussions and semi-structured questionnaires were conducted with a total of 80 respondents. Plant importance analysis was done using four quantitative indices (Use value, Use report, Informant consensus factor and Fidelity level). In total, 153 plants under 126 genera and 62 families are recorded. Fabaceae (11 spp.) was the most dominant family and *Clerodendrum* and *Solanum* (5 spp. each) were the most dominant genera. The highest use values were recorded for *Musa balbisiana* (0.087) followed by *Paederia foetida* (0.075). Kidney stone has the highest Informant Consensus Factor value of 0.97 with 74 use reports for 3 species. A total of 7 species were found to have $\geq 90\%$ Fidelity Level and *Cissus quadrangularis* recorded the highest value, i.e. 93.7% FL for treating bone fracture with 75 use reports. In addition, a review of ethnomedicinal plants published in earlier literature for the community is presented, and 77 plants are reported as new ethnomedicinal records for the community. A list of bioactive compounds found in the presently reported plants is also listed. Though modern health facilities have gained pace in the developing countries like India, traditional medicine still co-exists with tribal communities as these are the nearest and reliable forms of treatment in Assam, exemplified by the high degree of reliance on it.

Keywords: Traditional medicine, Ethnobotany, Assam, Mishing, Quantitative analysis.

1. Introduction

1.1. Traditional medicine

Traditional medicine (TM), also known as complementary or alternative medicine, comprises the knowledge, skill, belief, theories and practices of an indigenous community that are used to diagnose, treat and cure any ailment as well as to maintain a healthy life. It has been used for centuries and recently it has gained a lot of attention in the developed countries as well (Mahomoodally, 2013). Herbal medicine is also a form of TM and addresses plants as active ingredients. It may be leaves, barks, fruits, seeds, roots, latex, and even complete plants (Pan et



Empowering Tai-Phake Women Through Rural Tourism: A Study in the Nam Phake village of Naharkatia in Dibrugarh District of Assam

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Abstract: *Rural tourism is a very important part of tourism industry around the world. It is a form of nature based tourism which uncover the rural life cycle. Tai Phake is the branch of great Tai race and the Nam Phake village in Naharkatia(Assam) is home to a small population of them and the village has great diversity of cultural and natural resources which makes Nam Phake village a attractive tourist destination. The researcher, in this paper aims to accessthe scope and potentialities of empowering Tai Phake women through rural tourism in Nam Phake villge of Dibrugarh district of Assam.*

Keywords: *Rural life, natural resources, tourist destination, empowerment.*

Introduction:

Rural-tourism is also a new concept, developed around the idea of travelling to rural places of natural beauty, moving around and staying with for a couple of days. Rural tourism has the twin objectives of conserving environment and improving the socio-economic welfare of the local people. The state of Assam has ample of scope for rural tourism, because of its natural scenario and climatic condition. The state is virtually free from industrial pollution. The enchanting rivers, the thick forest, the blue hills, flora and fauna are the base on which an eco-friendly green tourism industry can be developed. For the development of rural economy with sustainability, rural tourism is regarded as an essential part for rural development. Basically Rural tourism is a form of nature based tourism, which uncover rural life, rural culture and rural heritage at different rural locations, thereby uplifting the local communities socially and economically. Rural tourism has always created a huge impact on the local economy and the socio-economic and socio-cultural scenario of the concern area on one hand and carries potential scope for the rural residents on the other (bhattacharya P 2014). Rural tourism brings people of different culture faith, language and life style close to each other and gives a vast outlook of life. It not only generates employment to the people of rural area but also improves the social,

2022-23



Problems of Handloom Weavers in Assam: A Case Study of Kamrup District, Assam

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Abstract

The handloom sector plays an important role in our economy not only providing employment or generating income, but also the handloom products have its own identity of different state or region by its unique design. The changing fashion trends could not fade the glory of handloom products of our country. But the sector is facing several problems such as low income, low educated people, low creditability etc. But the future growth in the handloom sector could be achieved through a series of strategic policies in the major constraint areas and could make the sector more vibrant. Here, an attempt has been made to analyse the economic status of handloom weavers along with different personal and social problems faced by the handloom weavers in Kamrup district of Assam.

Key Words: Handloom Weavers, Personal Problems, Socio Cultural Problems, Economic Status, Women empowerment

1. Introduction

Handloom weaving occupies a pivotal place in the socio-economic fabric of Assamese society. This age-old household craft has brought a sense of pride, dignity and social status among the weavers (Bori & Bhattacharyya, 2021). Being more labour-intensive, the handloom weaving sector in Assam provides employment to 1,59,577 full time weavers and 8,90,612 part time weavers during 2021-22 (Economic Survey Assam, 2022-23). Out of the total handloom households of India, Assam represents around 40.37 percent of total weavers and women weavers comprise 53.89 percent out of the total women weavers of India (Fourth Handloom Census of India 2019-20). Therefore, empowering women in the handloom sector would likely build livelihood development and cushion their financial management through employment (Goswami, 2005) and any government initiative to develop handloom sector directly intensify the empowerment of women in the state. It was reported in a study that participation of nearly 89% of women weavers in the self-help group not only increased their monthly income and production in handloom products but also improved their standard of living (Baishya, 2019).

Weavers, in Assam are mainly from the vulnerable and weaker sections of the society, who weave for their household needs and contribute to the production. Therefore, handloom weaving as an activity is in crisis with low productivity, low wages, low literacy levels,

Management of Phomopsis Fruit Rot Disease of Brinjal (*Solanum melongena* L.) Caused by *Phomopsis vexans* under in Vivo Condition

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Abstract

Brinjal (*Solanum melongena* L.) is an important agricultural crop grown globally. Phomopsis fruit rot incited by *Phomopsis vexans* is a serious disease and can cause up to 15-62% yield losses. The disease is managed by application of fungicides which could lead to several environmental and health related problems. Thus, the present study was undertaken to find out the efficacy of fungicides, bio-agent and plant extracts against the disease of brinjal at CPCRI, Kahikuchi, Guwahati by following randomized complete block design (RCBD) with three replications under field condition during 2020-2021. Two fungicides (Bavistin 50 and Captan-50), a bio-agent *Trichoderma viride* and two botanicals (*Allium sativum* and *Allamanda cathartica*) were evaluated for their effectiveness against Phomopsis fruit rot. Result showed that seed treatment and foliar application with Bavistin @ 0.1% showed lowest disease incidence (8.3%) and highest yield contribution (303.55 q/ha) followed by Captan (13.3%) disease incidence @.2% and gave yield (255.55 q/ha) while the bio-agent *Trichoderma viride* 10⁸ conidia/ml was observed (16.6%) disease incidence with (228.88 q/ha) yield. Among the two plants extracts @ 15 percent concentration *Allium sativum* and *Allamanda cathartica* found (21.6%) and (25%) disease incidence with 213.33q/ha and 200 q/ha yield respectively in comparison to untreated control.

Key words: Bio-agent, *Solanum melongena*, *Phomopsis vexans*, Evaluate, Fruit rot, Fungicides, Plant extracts

Brinjal or eggplant is a popular vegetable crop grown in almost all districts of Assam. It is called king of vegetable due to its wide usage in every Indian food [1-2]. In India, Brinjal is cultivated in an area of 0.72 million ha with a production of 12.32 million tones and productivity of 16.95 t. ha⁻¹ during the year 2016-17 [3]. It is grown round the year. This important crop is known to suffer from 12 diseases and amongst them fruit rot caused by *Phomopsis vexans* one of the major constraints of brinjal cultivation [4]. Mahadevakumar *et al.* [5] reported that yield losses 15 to 62% of eggplant due to Phomopsis fruit rot caused by *Phomopsis vexans*. It reduces yield and marketable value of the crop from 20-50% [6-9]. Due to Phomopsis fruit rot huge loss of yield, decreased fruit number (34.8%) and fruit weight up to 17% reported by [10]. The pathogen is generally dispersed by rain splashes and through rotten parts and insects [11]. Pale to light brown sunken spots develop on the infected fruits. Many workers have reported the varied efficacy of chemical fungicides to control the disease. Biological control could be successful alternative to chemical. Antifungal activities of Garlic, Neem, Alamanda, have been reported by many researchers [12-13]. Therefore, management of *P. vexans* is very important as it increasing the productivity and production of eggplant. Keeping in view the present study was

under taken to find out the effective fungicides, bio-agent and plant extracts against the fruit rot disease of brinjal under natural condition.

MATERIALS AND METHODS

On the basis of good performance showed at *in vitro* tests two fungicides (Bavistin 50 @ 0.1%, Captan-50 @ 0.2%), one fungal antagonist (*T. viride*) and two botanical extracts (*Allium sativum*, *Allamanda cathartica* @ 15%) were selected for their efficacy in controlling the disease in fields condition.

Seed treatment with *T. viride* spore suspension

Brinjal seeds were soaked in the adhesive spore suspension for 30 sec. and then in the antagonistic spore suspension of 10⁸ conidia/ml for half an hour. After soaking, the treated seeds were dried in shade [14].

Preparation of suspension of *T. viride*

Spore suspension of *T. viride* was prepared from 15 days old culture grown in PDA slants. The spores were suspended in sterile distilled water and the concentration was adjusted to 10⁸ conidia/ml using haemocytometer. Carboxy methyl cellulose

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Sabebaro Namo Das

(CMC) 0.2% was used as an adhesive for treating brinjal seeds with *T. viride* spore suspension.

Seed treatment with fungicides

Wet seeds treatments with fungicides were done separately with Bavistin (0.1%) and Captan with (0.2%). Untreated seeds served as control [15].

Seed treatment with plant extracts

Seeds were dipped in garlic and *Allamanda* extract at 15% concentration for half an hour and the untreated seeds served as control. The liquid was drained off and seeds were shade dried before sowing in pots as per methods of Islam and Meah [15].

Foliar spray

T. viride @ 10^8 conidia/ml, fungicides Bavistin (@ 0.1%) and Captan (@ 0.2%) and plant extracts Garlic and *Allamanda* @ 15% were sprayed into the plant with the help of atomizer till the wetting of leaves at four different intervals [16].

Details of the treatments

There were altogether seven treatments in the experiment and the combination as follows:

T₁: Control without pathogen.

T₂: Inoculated control only *P. vexans*

T₃: Seed treatment + spray with Bavistin @ 0.1% + *P. vexans*

T₄: Seed treatment + spray with Captan @ 0.2% + *P. vexans*

T₅: Seed treatment + spray with *T. viride* @ 10^8 conidia/ml + *P. vexans*

T₆: Seed treatment + spray with *A. sativum* @ 15% + *P. vexans*

T₇: Seed treatment + spray with *A. cathartica* @ 15% + *P. vexans*

Percent of fruit rot infection was recorded for *Phomopsis vexans* with the following formula:

$$\text{Percent of fruit rot incidence} = \frac{\text{No. of fruits infected}}{\text{Total No. of fruits}} \times 100$$

Field experiment: The field experiment was done at CPCRI, Kahichuci, Guwahati during the year August, 2020 to February, 2021.

Preparation of the land

Experimental area was ploughed twice by tractor drawn disc plough up to a depth of about 20 cm. Then properly leveled and stubbles were removed by manual labours. All the recommended fertilizers dose such as FYM @ 10 t/ha, N 50 kg/ha., P₂O₅ 50 kg/ha and K₂O 50 kg/ha were applied during the period of study. Seedlings raised from the surface sterilized certified seeds were transplanted into plots.

Design and layout of the experiment

Design	: Randomized block design
Replication	: 3 (Three)
Number of treatments	: 7 (Seven)
Total number of plots	: 21
Individual plot size	: 3m × 1.5m
Plant per plot	: 12 (twelve)
Spacing	: 75 cm × 60 cm (Row to Row and Plant to Plant)

Preparation of inocula

Phomopsis vexans was first grown on PDA medium and incubated at 28±1°C for 7 days. One mycelial disc of each of the two fungus were inoculated separately in two 500 ml

Erlenmeyer flasks contains 100 ml of Potato Dextrose Broth (PDB) medium to enhance more sporulation. Then the flasks were incubated at 25°C in a shaking incubator with a periodic shaking at 170 RPM and the spores were collected after 7 days. To remove the mycelial mat the culture was poured through cheese cloth and the final concentration was adjusted at 1×10^8 conidia/ml for using sterile distilled water. By using haemocytometer the number of spore were counted.

Preparation of pot

Earthen pots (30 cm in diameter and 45 cm in height) were used for the experiments. The pots were washed with sterilized water followed by 70 percent alcohol. Garden soils were collected broken into powdery form and remove root bits and other foreign materials. Then the soil was mixed with decomposed cow dung and sand in a ratio of 2:1:1 and sieved through 4 mm sieve and then sterilized in an autoclaves at 15 lb/ inch² pressure for one hour for three successive days.

Inoculation

Healthy seedlings of brinjal were raised in the experimental field. Seven days old pure cultures of *P. vexans* inocula were prepared from PDA slants. The leaves were washed with sterile water before spraying and 1×10^8 conidia/ml suspension was sprayed to 30 days old seedling, before flowering 60 days old and after flowering 90 days. The suspension was applied with the help of sprayer on abaxial and adaxial surfaces of leaves. The distilled water sprayed plants served as control.

RESULTS AND DISCUSSION

The data presented in the (Table 1, Fig 1) represented that all the treatments could reduce the incidence of fruit rot disease of brinjal, in compare to control; while the inoculated control showed 100 percent incidence. However, amongst the treatments applied Bavistin (T₃) was observed lowest (8.3%) incidence of fruit rot of brinjal. It was significantly most effective in comparison to the other treatments. Captan (T₄) was found to be the second best chemical in terms of lowest disease incidence which recorded (13.3%) followed by (T₅) treatment (*Trichoderma viride*) (16.6%). Among the two botanical treatments applied, *Allium sativum* extracts (T₆) was observed (21.6%) incidence whereas the extracts of *Allamanda cathartica* (T₇) recorded (25%) incidence of fruit rot disease which were found significantly better overall control (T₁) (33.3%). It was observed that ANOVA analyzed indicated that all the treatments were found statistically significant at 1% level against the development of fruit rot disease in brinjal as compared to control.

All the treatments used in the experiments reduced the incidence of fruit rot of brinjal. Among them Bavistin was noticed highest reduction of fruit rot (75%) followed by Captan (60%) and *Trichoderma viride* recorded (50.1%). The two botanical extracts applied, *Allium sativum* extract showed (35.1%) reduction while the *Allamanda cathartica* was found (24.9%) in terms of reducing the incidence over control.

Yield per plot

Data on fruit per plot were presented in (Table 2). There was significant difference among the treatments in this parameter. Perusal of data revealed that T₃ (Bavistin) recorded the maximum yield (13.66 kg) which was significantly higher than the other treatments. This was followed by T₄ (Captan) (11.5 kg), T₅ (*Trichoderma viride*) (10.3 kg), T₆ (*Allium sativum*) (9.6 kg), and T₇ (*Allamanda cathartica*) extract (9 kg).

The minimum yield per plot was observed in T₁ (control) treatment (7.5 kg). Statistically all the treatments were found

significantly high effective ($P \leq 0.05$) against the increase in yield of brinjal as compared to control.

Table 1 Effect of different treatments on disease incidence against *Phomopsis* fruit rot of brinjal in field condition

Variety	Treatments	% Disease incidence	% Disease reduction over control
Bhola (Pusa Kranti)	T ₁ (Control)	33.3 a	000
	T ₂ (Inoculated control)	100 b	000
	T ₃ (Bavistin)	8.3 c	75
	T ₄ (Captan)	13.3 d	60
	T ₅ (<i>T. viride</i>)	16.6 d	50.1
	T ₆ (<i>Allium sativum</i>)	21.6 e	35.1
	T ₇ (<i>Allamanda cathartica</i>)	25 e	24.9

Values within the same column having a common letter (s) do not differ significantly ($P \leq 0.05$) by DMRT

Table 2 Effect of different treatments on yield per plot of brinjal

Variety	Treatments	Yield per plot (kg)	Yield per plot (q/ha.)	% Yield increase over control per plot
Bhola (Pusa Kranti)	T ₁ (Control)	7.5 a	166.66	000
	T ₂ (Inoculated control)	0 b	000	000
	T ₃ (Bavistin)	13.66 c	303.55	82.13
	T ₄ (Captan)	11.5 d	255.55	53.33
	T ₅ (<i>T. viride</i>)	10.3 de	228.88	37.33
	T ₆ (<i>Allium sativum</i>)	9.6 de	213.33	28
	T ₇ (<i>Allamanda cathartica</i>)	9 e	200	20

Values within the same column having a common letter (s) do not differ significantly ($P \leq 0.05$) by DMRT

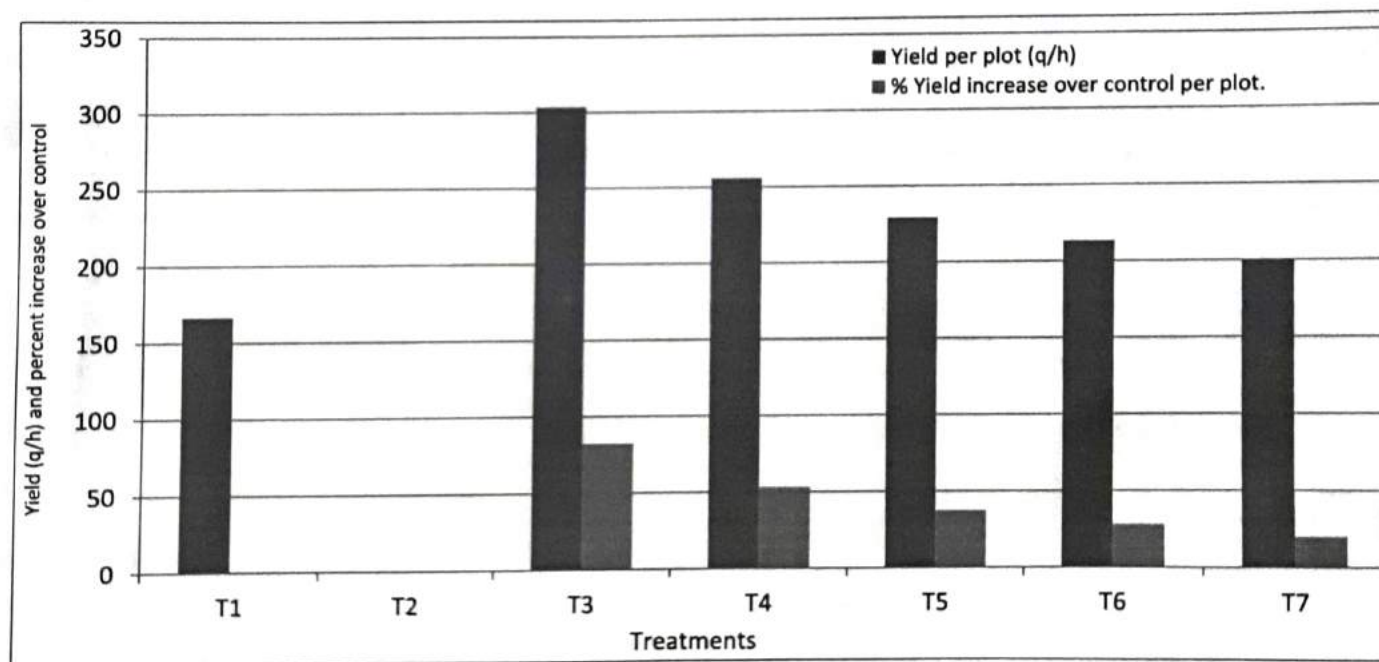


Fig 1 Effect of fungicides, *T. viride* and botanicals extracts against yield (q/h) per plot and yield increase in field condition

Yield increase in hectare per plot

The total yield of brinjal was highly influence due to application of different treatments (Table 2, Fig 1). The yield ranged from 166.66 q/ha to 303.55 q/ha. Bavistin (T₃) was recorded the most effective which could significantly increase the yield to the extent of (V₁=303.55) q/ha against (82.13) percent increase over control. This was followed by Captan (T₄) resulting in (255.55) q/ha and (53.33) percent increase in yield. The next treatment (T₅) *T. viride* showed (228.88) q/ha and (37.33) percent increase in yield. However, among the two botanical extracts used *Allium sativum* extract (T₆) was found (213.33) q/ha against (28) percent increase in yield. Similarly, *Allamanda cathartica* (T₇) was recorded (200) q/ha and (20) percent yield increased over control. The lowest fruit yield was found in T₁ treatment (control) 166.66 q/ha. The effects of fungicides and the bio-agent were more potent when applied, rather than two botanical extracts. Among the treatments

Bavistin when applied was found to be most effective in reducing the incidence of disease and increasing in yield over control. This may be due to inhibitory systematic protection imparted by Bavistin to the seeds of brinjal against the pathogen. Captan is the next best effective treatment, regarding the disease control and increased the yield. *T. viride* was found moderately effective treatment reducing the disease incidence as well as increased in yield. The reduction in the incidence of the disease with increase in yield may probably be attributed to the killing of the seed-borne pathogen including *Phomopsis vexans*. Among the two botanical extracts both *Allium sativum* and *Allamanda cathartica* were found to be effective in terms of reducing the disease incidence and increased the yield. The present finding is in agreement with the findings of Phansawan *et al.* [17] they reported that Carbendazim was proved the best control of *Phomopsis vexans* and increasing the yield of brinjal. Foliar spray of carbendazim (0.1%) twice thereafter at 15-day

interval which resulted in lowest disease incidence and highest fruit yield against *Phomopsis* fruit rot [18] also coincided the result of laboratory study wherein, carbendazim completely inhibited the mycelia growth of the pathogen [19]. The potentiality of *Trichoderma* spp. used as bio-pesticide for protection of several crop diseases found effective [20-22]. Garlic extract (5 and 10% w/v) inhibited the mycelial growth of *Phomopsis vexans* [23]. Seed treatment with botanicals like garlic (1:1w/v) or *Allamanda* (1:1 w/v) extract decreased the incidence of seedling blight. *Allium sativum* and *Allamanda cathartica* tablet controlled the seedling disease of eggplant

[24]. The botanical extracts have a very good potentiality against seed borne pathogen of brinjal.

CONCLUSION

It is concluded that fruit rot disease of brinjal can be effectively managed by seed treatment and foliar application with fungicides, bio-agent and plant extracts. These were found to be most effective in terms of disease incidence and increasing the yield over control.

LITERATURE CITED

1. Choudhary B, Gaur K. 2009. The development and regulations of *Bt* brinjal in India. *ISAAA Brief* 38: 1-2.
2. Singh BK, Singh S, Singh BK, Yadav SM. 2014. Some important plant pathogenic disease of brinjal and their management. *Plant Pathology Journal* 13(3): 208-213.
3. NHB. 2017. 3rd advance estimates of area and production of horticultural crops (2016-17). *Areapro* 16/17: 3.
4. Nahar N, Islam MR, Uddin MM, de Jong P, Struik PC, Stomph TJ. 2019. Disease management in eggplant (*Solanum melongena* L.) nurseries also reduces wilt and fruit rot in subsequent plantings: A participatory testing in Bangladesh. *Crop Protection* 120: 113-124.
5. Mahadevakumar S, Amruthavalli C, Sridhar KR, Janardhana GR. 2017. Prevalence, incidence and molecular characterization of *Phomopsis vexans* causing leaf blight and fruit rot disease of brinjal in Karnataka (India). *Plant Pathology and Quarantine* 7(1): 41-58.
6. Akhtar J, Khalid A, Kumar B. 2008. Effect of carbon sources, substrates, leachates and water grades on germinability of *Phomopsis vexans*. *African Journal of Research* 3: 549-553.
7. Chaukhe AN, Patil MJ, Tekale AG, Deshmukh AP. 2020. Effect of chemical control of phomopsis blight of brinjal caused by *Phomopsis vexans*. *International Journal of Chemical Studies* 8(4): 2051-2053.
8. Pandey A. 2010. Studies on fungal diseases of eggplant in relation to statistical analysis and making of disease calendar. *Recent Research in Science and Technology* 2(9): 1-3.
9. Jayaramaiah KM, Mahadevakumar S, Charithraj AP, Janardhana GR. 2013. PCR based detection of *P. vexans*. The causative agent of leaf blight and fruit rot disease of brinjal (*Solanum melongena* L.). *International Journal of Life Sciences* 7(1): 17-20.
10. Kidasha FM. 2010. Effect of phomopsis blight on eggplant production in Nyagatare district. *M. Sc. Thesis*, Faculty of Agriculture, Umutara Polytechnic.
11. Mahadevakumar S, Janardhana GR. 2016. Leaf blight and fruit rot disease of brinjal caused by *Diaporthe vexans* (*Phomopsis vexans*) in six agro-ecological regions of South West India. *Plant Pathology and Quarantine* 6(1): 5-12.
12. Islam M. 2005. *Country News*. Holiday Publication Limited. 8: 3-4.
13. Gurjar MS, Ali S, Akhtar M, Singh KS. 2012. Efficacy of plant extracts in plant disease management. *Agricultural Sciences* 3: 425-433.
14. Elad Y, Kalfon A, Chet I. 1982. Control of *Rhizoctonia solani* in cotton by seed coating with *Trichoderma* spp spores. *Plant and Soil* 66: 279-281.
15. Islam MR, Meah MB. 2011. Association of *Phomopsis vexans* with eggplant (*Solanum melongena*) seeds, seedlings and its Management. *The Agriculturists* 9(1/2): 8-17.
16. Beura SK, Mahanta JC, Mohapatra KB. 2008. Economics and chemical control of *Phomopsis* twig blight and fruit rot of brinjal. *Journal of Mycopathological Research* 46(1): 73-76.
17. Phansawan B, Prapamontol T, Thavornnyutikarn P, Chantara S, Mangklabruks A, Santasup C. 2015. A sensitive method for determination of carbendazim residue in vegetable samples using HPLC-UV and its application in health risk assessment. *Chiang Mai Journal of Sciences* 42(3): 681-690.
18. Chaukhe AN, Patil MJ, Sawai HR, Parate RL, Chargin SU. 2017. Fungicidal control of *Phomopsis* blight in brinjal. *International Journal of Researches in Biosciences and Agriculture Technology* 2(5): 385-387.
19. Priya Reddy YN, Jakhar SS, Dahiya OS. 2017. Eco-friendly measures for control of *Phomopsis vexans* of brinjal. *National Conference on Harmony with Nature*, 21-23rd December 2017, Warangal, Telangana, Souvenir and Abstracts. pp 70-71.
20. Howell CR. 2003. Mechanisms employed by *Trichoderma* species in the biological control of plant diseases: the history and evaluation of current concepts. *Plant Disease* 87(1): 4-10.
21. Sharon E, Bar-Eyal M, Chet I, Herra- Estrella A, Kleifed O, Spigel Y. 2001. Biological control of the root-knot nematode *Meloidogyne javanica* by *Trichoderma harzianum*. *Phytopathology* 91: 687-693.
22. Ghosh SK. 2017. Study of some antagonistic soil fungi for protection of fruit rot (*Phomopsis vexans*) and growth promotion of brinjal. *International Journal of Advanced Research* 5(7): 485-494.
23. Jakatimath S, Mesta R, Mushrif S, Biradar IB, Ajappanavar PS. 2017. *In vitro* evaluation of fungicides, botanicals and bio-agents against *Phomopsis vexans*, the causal agent of fruit rot of brinjal. *Journal of Pure and Applied Microbiology* 11: 229-235.
24. Mahmud MR. 2008. Determining durability of bioactivity covered and uncovered garlic and *Allamanda* tablet against seedling diseases of eggplant. *An M. Sc. Thesis*, Submitted to the Department of plant pathology, Bangladesh Agricultural University, Mymensingh. pp 1-130.

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TRIBAL CHARACTERS OF NORTHEAST INDIA: A STUDY ON THE CONTROL OF SPREAD OF COVID-19

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Abstract:

Northeast (NE) India is connected to the main land of the country with a narrow strip of 20 K.M. at chicken's neck (Siliguri Corridor), on Assam-West Bengal border. Out of the total geographical land boundary of Northeastern Region (NER) 99 percent (5182 KM) are surrounded by the foreign countries viz. Bangladesh, Bhutan, Myanmar, China and Nepal. Out of the total land area in NER major portion are occupied by tribal people. Non-



Recent advances in fluorescent 0D carbon nanomaterials as artificial nanoenzymes for optical sensing applications

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Abstract

The new member of carbon nanomaterial family, 0D carbon nanomaterials attracted the attention of the scientific family recently. The 0D carbon nanomaterials which include carbon dots, graphene quantum dots, carbon nanodots, etc. and possess some outstanding optical and electronic properties. There are various reports on nanomaterials as artificial nanoenzyme for colorimetric detection of biomolecules and toxic metal ions. Artificial nanoenzyme possess some extraordinary properties compared to natural nanoenzyme due to their long self-life, cost-effectiveness, high surface area, size controllable, and less environment-sensitive nature. These nanoenzyme possess some active sites for the oxidation of H_2O_2 in the presence of peroxidase-like substrates such as TMB, ABTS, OPD, etc. There is a need for a review to compile the optical properties of modified carbon dots as artificial nanoenzyme to detect biomolecules. This mini-review is addressed in that direction and exclusively focused on the synthesis, characterization, and optical sensors for detecting biomolecules and some toxic ions in the real sample. The detailed mechanistic insight into these colorimetric biosensors is also highlighted herewith. I think this review article paves the way for new possible strategies for tuning and enhancing the peroxidase-like catalytic activity of these carbon dots-based artificial nanoenzyme in near future.

Keywords Carbon dots (CDs) · Fluorescence · Peroxidase mimic · Nanoenzyme · Colorimetric sensor

Abbreviations

CQDs Carbon quantum dots
CDs Carbon dots
GQDs Graphene quantum dots
PL Photoluminescence

Introduction

Natural enzymes possess the efficient biocatalytic activity and participated in complex metabolic processes, nutrition, and energy conversion in living organisms [1–3]. They are very specific and efficient in the reactions in which enzymes are involved. One example of a natural enzyme is horseradish peroxidase (HRP) which catalyzes the peroxide decomposition protecting the cell from toxic chemicals. Again activity of H_2O_2 can be used as peroxidase to take part in oxidation processes in biochemical and various numerous biological

systems [4, 5]. They are used in agriculture, chemical, food, pharmaceutical industries, biosensing, environment remediation, drugs, etc. [6, 7]. The main disadvantage of natural enzymes is that it is very easy to nullify their effect of natural enzymes. Because the enzymes are active only under extremely mild physiological conditions. In extremely high physiological conditions they are not suitable for reactions for large-scale use. Some reported challenges with natural enzymes are reusability, high denaturation rate, costly purification, and preservation processes [8, 9].

With the progress of research in interdisciplinary science and technology, there is an urgent need of artificial nanoenzyme mimics that possess peroxidase-like activity like HRP. In simple word nanoenzymes possess enzyme-catalyzed properties and are easy to prepare, size controllable, and adjustable in function having their dimensions in nanorange [10, 11]. First nanoenzyme was reported by Gao L and his team in 2007 in the case of Fe_3O_4 nanoparticles which show peroxidase-like activity [12]. After that discovery, these enzymes mimic attracted much attention of the scientific community and immediately come into focus. Other metal-based enzymes are Au, Ag, MnO_2 , and Cu_2O nanoparticles etc. which also exhibit the same kind of catalytic activity

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PUBLIC HEALTH EXPENDITURE TRENDS ON REPRODUCTIVE AND CHILD HEALTH IN INDIA

□ Minakshi Baro*

ABSTRACT

The field of reproductive and child health (RCH) covers a wide range of subjects pertaining to maintaining the health of mothers and their offspring. It covers areas of medicine related to conception, pregnancy, delivery, and the formative years of a child's life. It covers family planning, access to contraception, and prenatal care in terms of reproductive health. It is vital to protect moms' health prior to, during, and following childbirth. This entails receiving the right prenatal care, having a trained delivery attendant, and receiving postnatal care to handle any potential problems or complications. RCH initiatives are critical to lowering mother and child mortality, fostering strong families, and improving community well-being. To achieve better outcomes in RCH, it is imperative to address socio-economic determinants, enhance education, and improve access to healthcare services. This paper strives to study the trends of government expenditure on RCH based on various published data of Ministry of Health and Family Welfare, Government of India, statistics released by the Family Welfare Programme in India, NHM reports, latest rounds of National Family Health Survey data, etc. The paper shall also attempt to see if increasing trends in public expenditure on RCH has simultaneously resulted in improvement in RCH indicators.

Keywords : Reproductive and Child Health (RCH), Health, Expenditure, Public, Trends

Introduction :

Reproductive and Child Health (RCH) is a comprehensive sector-wide coverage programme of the monumental National Health Mission (NHM) of the Government of India. This mission strives to provide services to help RCH reach its goals, which include lowering the rates of maternal and newborn mortality as well as overall fertility. The RCH initiative seeks to reduce socio-geographical gaps in access to and use of high-quality services for reproductive, maternity, newborn, child, and adolescent health. The National Population Policy of 2000, the National Health Policy of 2001, and the Millennium Development Goals of the Government of India are all aligned with the RCH initiative, which was introduced in April 2005 with the support of the State governments. The RCH programme has six crucial components: nutrition, family planning,

maternal health, and child health. Maternal health, child health, nutrition, family planning, adolescent health, and Pre-Conception and Prenatal Diagnostic Techniques (PC-PNDT) are the six key facets of the RCH programme. The National Health Mission and the Millennium Development Goals (MDGs) 4 and 5 both place a strong emphasis on improving mother and child health and ensuring their survival. Reducing maternal, new-born, and child mortality is another emphasis of SDG 3.

Since 1997, the expenditure on the RCH programme has substantially increased both at an aggregate level and on a per capita basis compared to previous years. The possible reason is that the loans on the RCH programmes are being made liberally available from the World Bank to strengthen the additional components of RCH. Fund allocation under the RCH

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Bioprospecting of endophytes associated with *Solanum* species: a mini review

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Abstract

Endophytes are considered the repository of bioactive compounds as they contain a wide variety of chemically and structurally diverse secondary metabolites. The endophytes associated with *Solanum* species have been studied for the last few years. Therefore, the present study aimed to discuss the bioactive compounds produced by endophytes associated with *Solanum* species and their biological activities. Our study reveals that among the *Solanum* species, only 13 species have been studied in the context of endophytes so far. Overall, a total number of 98 bioactive compounds have been reported from endophytes associated with *Solanum* species, of which 64 compounds are from fungi and 34 compounds from bacteria. These bioactive compounds belong to different chemical groups such as sterols, flavonoids, volatiles, and many others and exhibited diverse biological activities including antimicrobial, anticancer, antiparasitic, antioxidants, and plant growth-promoting activity. Moreover, the endophytic fungi were reported to produce two compounds that are often present in the host plants. These condensed data may open the door for further research and provide details on potent endophytes associated with *Solanum* species.

Keywords Bioactive compounds · Biological activity · Endophytes · *Solanum*

Introduction

The utmost step in the research on endophytes is the selection of an economically important and promising host plant. The reason behind the selection of host plants is to understand the plant–endophyte interaction as well as to discover new bioactive compounds produced by those endophytes that could be helpful in the pharmaceutical industry. In this respect, plants of ethnomedicinal value are excellent candidates for the study of endophytes, as endophytes can imitate the biochemistry of their colonized host plant to stimulate similar types of bioactive compounds or derivatives which are even more bioactive than the types of their host plants (Sadrati et al. 2013). For example, capsaicin is produced by an endophytic fungus *Alternaria alternata* from *Capsicum annum*, which is a key compound of the host plant

(Devari et al. 2014). Anticancer drug taxol is produced by *Lasiodiplodia theobromae* which is an endophytic fungus of the medicinal plant *Morinda citrifolia* (Pandi et al. 2011). Similarly, camptothecin is reported from the endophytic bacteria *Paenibacillus polymyxa* found in *Camptotheca acuminata* (Nchabeleng 2017). However, such phenomena might be the consequence of horizontal gene transfer (HGT) between the endophytes and host plants (Sachin et al. 2013).

The *Solanum* is the largest and most representative genus in the family Solanaceae that comprises more than 2000 species (Kaunda and Zhang 2019). The genus is very rich in economically important species that include both food crops and ornamental plants. Besides, the species of *Solanum* is well known for ethnopharmacological applications due to the presence of various bioactive compounds. There are about 670 compounds including alkaloids, terpenes, flavonoids, lignans, steroidal saponins, steroidal sterols, phenolic compounds, coumarins, and many more compounds documented by Kaunda and Zhang (2019) in their review. In addition, it is reported that the wild variety of traditional or indigenous vegetables belonging to *Solanum* has higher nutritional value than domesticated species (Mili et al. 2021). Furthermore, they are grown healthy in the wild with

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NEW DISEASE REPORT

First report of leaf spot disease of *Tabernaemontana divaricata* caused by *Colletotrichum coffeanum* in IndiaS. Saha¹  | C. Mili²  | A. Sarma¹  | K. Tayung¹ ¹Mycology and Plant Pathology Laboratory, Department of Botany, Gauhati University, Guwahati, Assam, India²Department of Botany, B.P. Chaliha College, Kamrup, Assam, India

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KEYWORDS

crape jasmine, shot-holes

Tabernaemontana divaricata (crape jasmine, pinwheel flower) is an ornamental, flowering, evergreen shrub in the family Apocynaceae (Jena *et al.*, 2019). It is native to India and other tropical regions in Asia. The different parts of the plant are used in traditional medicine for a range of pharmacological activities. In September 2023, black spot-like symptoms were observed on the leaves of *T. divaricata* near Gauhati University (26°9'14.8"N, 91°39'38.1"E), Guwahati Assam, India. At the early stage of infection, disease symptoms appeared as small, circular and yellow-halo spots and developed into angular brown spots in the later stages of infection. As the disease progressed, the leaf tissues around the spots became yellow and the lesions enlarged. Gradually adjacent lesions merged, became necrotic and shot-hole symptoms appeared (Figure 1).



FIGURE 1 Leaf spot symptoms observed in the field: (a) healthy plant of *Tabernaemontana divaricata*, (b) initial leaf symptoms and (c) matured leaf spot showing traces of shot-holes.

Twenty diseased leaves were collected from ten plants and washed in running tap water to remove soil and associated debris. The samples were surface sterilised using 70% ethanol solution, followed by 0.2% NaOCl solution, for one minute each, and were subsequently rinsed three times with distilled water (Omar *et al.*, 2018). The surface-sterilised infected leaves were cut into small fragments (5 × 5 mm²) using a sterile scalpel. Each fragment was transferred onto potato dextrose agar (PDA) plates and incubated at 28±2°C for seven days. Hyphal tips growing from the fragments were sub-cultured on PDA. Pure cultures were produced by transferring the tips of fungal hyphae onto PDA plates. Colonies were cottony, white to pale orange, whereas the reverse side formed a pale orange to a central salmon colour

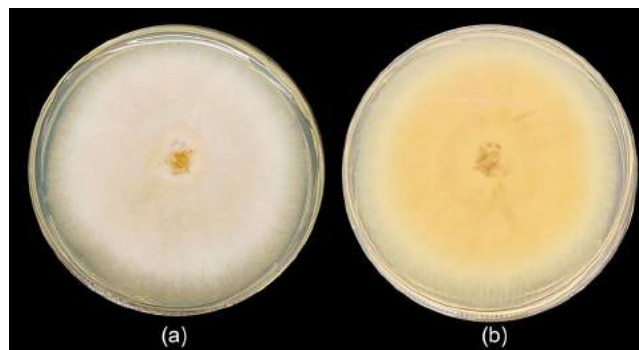


FIGURE 2 Cultural characteristics of *Colletotrichum coffeanum* (isolate TDCK 1) on potato dextrose agar medium: (a) front view and (b) reverse view after seven days' incubation.

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Microbes as a potential bioremediation tool for atrazine-contaminated soil: A review

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ABSTRACT

Atrazine is a controversial and widely used herbicide to control weeds in both agriculture fields and residential sites. Instead of adopting manual weed control, atrazine is being used by people who resulted in a negative impact on the environment. Therefore, removing atrazine in soil has received considerable attention. Microorganisms have terrific potential for degradation of hazardous pollutants which always motivates continuous bioremediation-directed research. The objective of this review is to identify, analyze, and compile all the studies on atrazine-degrading microorganisms. Particular emphasis is made on the atrazine degradation pathways, a diverse group of bacteria, fungi, and yeast along with the genetics and enzymology aspects of degradation. The present review may act as a source of information for developing a cheaper and microbiological method for rescuing the atrazine-contaminated soil and water in the future.

1. INTRODUCTION

The widespread and long-term use of chemicals including atrazine (2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine) herbicide in both agriculture and non-agricultural field is still a severe concern today. These compounds have the potential to runoff and leach through the soil leading to surface and groundwater contamination [1]. Most attentively, atrazine can cause serious human health problems such as endocrine disruption, central nervous system, reproductive system, immune system, and carcinogenic disorders [2]. Atrazine inhibits photosynthesis efficiency, superfluous energy dissipation in electron transport, and destroys cellular structure which resulted in the inhibition of growth in algae [3]. Moreover, atrazine has a moderately persistent, long half-life, and high mobility in soil than some other herbicides. Due to its high toxicity, persistence, and mobility in the environment, atrazine was prohibited by the European Union in 2004 [4], but it is still one of the most extensively used herbicides against weeds today in several countries, for example, annually 23 million kg in the USA [5], 27 million kg in Brazil, 16 million kg in Argentina [6], and 3 million kg in India [1]. Therefore, for a safe and sound environment, the rapid abolition of atrazine from the contaminated site has become very crucial.

Microorganisms have tremendous potential for bioremediation and herbicide degradation due to the presence of various catalytic enzymes [7]. The presence of such characteristics, microorganisms can degrade atrazine into different metabolites that act as a source of energy for other organisms. Many strains have been reported for their abilities in atrazine mineralization including members of the genera *Pseudomonas*, *Bacillus*, *Burkholderia*, *Arthrobacter*, *Enterobacter*, and *Norcardioides* [8-11]. In addition, several fungal species belonging to the genera *Fusarium*, *Aspergillus*, *Penicillium*, and *Pleurotus* have also been isolated and studied for degradation of atrazine [2,12,13]. Therefore, microorganisms can be chosen for easy and better strategies for the rescue of atrazine polluted sites ecofriendly.

In recent years, several review papers have been published on the degradation of atrazine in different aspects such as the impact of atrazine in the aquatic environment, technologies used to reduce the toxicity of atrazine as well as advantage and disadvantages [14,15]. In 2021, a similar review was published by Abd Rani *et al.* [16] that focused on only bacteria while fungi and yeast are neglected. In contrast, this review is a humble attempt to accumulate all the microbes associated with atrazine degradation in a single article that has already been gathered through vigorous research. This article also presents the clear degradation pathways along with the genes and enzymes involved in atrazine-degradation. This review will help researchers to develop a cost-effective and efficient microbiological technology for the remediation of atrazine-contaminated soil.

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AN INDIAN DURING WORLD WAR I: A STUDY OF MULK RAJ ANAND'S *THE TRILOGY*

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Abstract

War is a very ambiguous term. It revolves around conflict of opinions among a group of nations or within a nation. War in reality is very disturbing and has unimaginable consequences. Plato has rightly said “only the dead have seen the end of war”. World War I and Indian participation is very much of a volunteer or forced service to the Britishers. Indians were not prepared for a war at that time. The economic and social conditions of India suffered a lot due to the British Raj and its political strategy that created a British hegemony over the People. Mulk Raj Anand was writing at a time when Indian English Writing did not flourish. Anand compared Indians with Germans which other writers of that time would hardly do, or dare to do. Anand tried to portray his world of War through a Sikh peasant youth Lal Singh. He established dislocation at multiple levels and intertwined them to speak of war. The struggle he talks about can be classified into three opinions i) The greatest struggle (World War I) ii) The freedom struggle (British imperialism) iii) Village struggle (Zamindars and Landlords exploitation). War has negativities but it has certain positives too: in the latter part of WWI women were being hired to fill the spaces reserved for men and this disrupted the traditional belief and stereotype. Anand does not support a war which is reflected in his writings but he does hint about the rise of brotherhood and resistance in the later part of the *Trilogy*. He sums up everything from Punjab to the war trenches in France and amalgamated them to the Indian Freedom struggle. In this paper I would like to critically analyse the various connotations of war (pre-war, wartime, post-war, and pre-Independence) and dislocations of Indians with a study of Mulk Raj Anand's *The Trilogy*.

Keywords: World War I, imperialism, dislocation, displacement, memory, culture, peasant-uprising, trauma, corruption.

Introduction and Background

War has been there in literature since ancient times. The chief means by which a territory was captured was war. Indians were associated with warfare since Kings and Emperors ruled India.

Ancient texts like The *Ramayana* and The *Mahabharata*, *Arthashastra*, *Harshacharita*, etc. showcased the warfare in ancient India. They are a great source of literature that justified the Indians were skilled warriors. Indian warriors were strategic too. They were equipped with ancient weapons of war along with animals that helped them in regimentation. They were very studious and has a vast knowledge about the battlefield. Unlike our armed forces commanded by officer in chief, they were commanded by Kings and Emperors.

Numerous books describe war and warfare which demonstrated the entire history of humanity. The Trojan war was one of the most famous ancient wars as described by Homer. Indian literature existed from very early times. The earliest known work of Indian literature is *Rig Veda* and it is written in Vedic Sanskrit. Due to the use of non-English, it took much time to get worldwide recognition. The Britishers manipulated and tricked Indians and propagated the English language. The British colonizers were very strategic and established their empire in India with their sharp and cunning wit. They targeted the dubhashis and used them to know about Indian culture, language, and literary insight. So, when they discovered the potential of Indian literature, they tried to showcase their tradition and books superior to Indian texts. Macaulay wrote in his *Minute* "A single shelf of good European library was worth the whole native literature of India and Arabia". These are the factors why Indian literature does not flourish much during the British imperialism. In a time when English was booming everywhere, Indian writers started writing. Writers like Bankim Chandra Chattopadhyay, Michael Madhusudan Dutt, R.K. Narayan, Mulk Raj Anand and Raja Rao contributed to Indian English Fiction in whatever ways they can. The translation was also a priority job and all the translation works started. The Indians started to explore their own writing in a wide range of exposure. Kisari Mohan Ganguli Translated the *Mahabharata* into English. Gradually the practice continued and amid several restrictions and fear of being detained writings flourished through different forms in English though less in number but it did not stop.

War literature is completely a new genre and people took time to get into the act of writing. The genre developed from the writing pieces such as poetry, letters, and other diary entries of the soldiers and their families. The war was much worse than any description of it is possible. Indian soldiers also wrote letters about their lives at the Marseilles. The letters were sent using the military postal service. Taking the advantage of power British government-imposed censorship on the letter writing and its form. If they did ever write the truth, it was excised by company officers, who censored all outing mails. The press was under rigid censorship throughout the way. This reflected the smaller number of literate people in the army as well in India. According to the 1911 census of India, only 11 percentage of Indian males were literate. The Britishers also appointed soldiers to write letters for the war veterans. Sepoy Lal Singh also worked as a letter-writer of the regiment he worked for. Not all war writings are written by soldiers', non-combatant also wrote about war and its impacts upon the people all around. It is hardly seen any war literature glorifying war, war

writing always echoes the horrors of war and repercussions in their writings. They mostly criticize the war, socio-political, and other economic shifts that shattered their lives. Anand has represented the basic amenities of Indian villagers and the factors that led to transformation of a nation on an epic scale. He demonstrated and translated Punjabi to English “Teaching me my own tune on my own drum” (86) and he also described the tradition of cattle naming done in India. So, in brief he provided details that showcases stagnant and bleak situation of Indian life transforming to a situation where people could breathe fresh air and take independent steps for various problems and find their solutions. All the three parts are inter-related to each other with a series of events that shows the transition. World War I and participation of Indians has a major role, is described in *The Trilogy*.

Literature Review

Articles and additional war related works give understanding into how class, sexual orientation, ethnicity, nationality formed the encounters of the First World War's casualties and soldiers turning to writers of war literature or becoming a war critic. Paul Fussell in *The Great War and Modern Memory* has written of the war that traumatized and transformed generation, ushered in the modern era, and revolutionized how we see the world. But he has not mentioned the Indians fighting in the trenches along with the Tommies and French. Author David Budgen presents an illustration of First World War literature across a large number of the combatant countries from the outbreak of the dispute up to the commencement of the Second World War. Specifically, his writing focuses upon the problems of language and translation confronted by the individuals who demonstrated writings on the war, and the distinctions of experience among the combatant and the non-combatant writers. One among the few works about Indians at The Great war shows most of the link of Indians in France and Belgium and its pre-1914 small wars in Asia and Africa, and comparing the performance of the Indian regiments on the western front to those in China, East Africa, Mesopotamia and elsewhere. George Morton-Jack in *The Indian Army on the Western Front* depicted Indian participation in The Great War and the contribution that saved a defeat of BEF in 1914. It also showcased the unpreparedness of Indian Army at the war with all its modern techniques which led to several speculations.

Gardner has criticised the Army in India's staff officers as similarly second-rate. For him, all these shortcomings created serious problems at First Ypres and shortly after. For example, the Indian commanders and staff ‘consistently overloaded the front trenches of their positions [because they] lacked sufficient knowledge regarding the proper deployment of troops under fire’. (Jack 22-23)

However, works on Indians turning to soldiers and their background works have hardly been discussed except Anand. This paper will attempt to fulfill the journey of Indian soldiers and their evolution from a villager to soldier and then a freedom fighter or revolutionary.

Methodology

The elementary supportive method is the qualitative research. Various literary articles, books, journals, critical notes, and websites are used to access relevant materials to substantiate this paper.

Aim

To investigate the association of Indian soldiers and their role in World War I which synthesize a resistance among Indian towards Independence.

Hypothesis

World war I and Indians have a history to uncover. The insignificant writings about war by an Indian depicts war literature was not a prevalent genre or it has been restrained.

Pre-War Scenario of Indian Village

Indian villages had enough to eat until the Britishers came and destroyed the situation throughout India. “And he talked Lalu of the days of his youth when he has raised good harvest and filled the barn to overflowing with grain and with pitchers of money, when he had three cows and a horse tied in the courtyard, and had bought and sold at the proper season, and turned a good balance between profit and loss. He talked to the boy about time when the seeds of their present misfortunes were sown, of when the ferungis came with their railgadis which took away the grain from the villages at the lowest prices. The ferungis, the ferungis. For he could never forgive the ferungis for all the new-fangled machines they had brought in, the heavy taxes they levied and their bad justice” (Anand 252). In the name of business, they started exploiting the people in various ways. They firstly targeted the lower strata of people who could hardly retaliate and voice against them. They initially started with the rural areas and took control of large groups of people by appointing moneylenders, zamindars, landlords and other official under them who could show their power over the other Indians in the villages. The appointed workers collected taxes for the British from the Indian people. In one of the instances a patwari who took a ride in a private vehicle ‘yekka’ refused to pay the fare giving excuses and at that very moment Jhandu a general public stood up and lashed out against him he was requested to ask for forgiveness but he stood firm and for which he was summoned once to the court in that instance he told. ““You are all the same, you officials of the sarkar!’ said Jhandu, walking away, ‘whether you be civil servants or army folk or police folk. You expect us to give you everything for nothing as soon as you put on a kot platoon or a uniform. And you bully buff and swagger about at poor people.... Someday, somewhere, something will happen, however, my friend and you will go back to where you came from. So, you had better settle to your work in the meanwhile and collect as much money as you can for the Sarkar from the peasants, for the days of reckoning draws near.’” (Anand 156) Not all people were scared of the Sarkar and some people like him too voiced their dissent. For they are the real frontline confronting warriors of Indian soil. These little contributions led to a great revolution

which make the Britishers left India. This also needs a courage to do in a time when everyone feared the Britishers and their officials. This is a bildungsroman and it represents a chronological sequence of works from the young foolish Lal Singh commonly known as Lalu who is the protagonist, to a loyal revolutionary. Lalu the protagonist is used by Anand to show the struggle India faces. He is a very terrific writer who is associated with a renovation of representing India and its culture. His writings are not what traditional writers always follow. He has detached himself from the set norms of traditional fiction writing by an Indian. He continued writing but on a different and better style than other writers. His characters were mostly from the lower strata of the society like the peasant, the sepoy, the sweeper, coolie, untouchable people, laborer's etc. and treats them with compassion and respects them as human being. His characters bring in a sense of Indian social and societal picture. With the help of writing, he tried to bring justice for the poor and the deceased and giving them a voice and identity of their own. Anand wrote about the layman and middle-class citizen at a time when most writings were dominated by the description of the elite class. He is in a way trying to be unique and show the actual picture at a pan India level. The simplicity in Anand can be seen through his descriptions of the life at village. He established a beautiful Indian village evening that is remarkable. It showcased peace, harmony, brotherhood, and the gentle greetings which is rarely found in the hustle bustles of modern India. "Weary peasants with shaggy beards and tangled hair murmured the thousand names of god as they traversed the irregular gullies, shrinking from the blasts of howling winter wind, or sat wrapped up in blankets in the cavernous shops of the bazaar, staring stonily ahead and greeting each other in slow whisper or hoarse, heavy voices. Only the shopkeepers were agile as they lit hurricane lamps and candle jets to illuminate the path of Lakshmi, the goddesses of wealth, across the platform of the shops and threshold". (Anand 142) He basically peeps into the intense misery of the people and the reason behind. His description about the Indians and its villagers shows how he introduced the persecuted in the realm of the novel which is a great contribution to the Indian English writing.

Anand in some instance shows a father son binary where we can see the father compares his life to be in the arm of his time. A sense of abject horror of the dark seems to have taken over Nihal Singh's confidence to defend and live life under the Britishers. It is his age that supported no vengeance and he remained calm and lament about the life he used to live. "And in spite of everything, it was better for him perhaps to be in the army for some time. Perhaps it was better to live in the cantonment than to have to live here under the shadow of Harbans Singh's omnipresent hatred, and to face the contempt of the elders and the nightmare of horrors visible and invisible in the village." (Anand 241)

The Britishers paid Indian soldiers to campaign for joining Army. A Sikh was very fashionably dressed and he was manipulating people by announcing luxury at the regiment of the Sarkar.

‘I have taken part in many campaigns as these medals on my chest, awarded to me by the benign Sarkar, testify. I fought in Chitral on the frontier, in Burma and in Chin. And I have won the respect and affection of angrezi officers. Truly, they are the friends of the poor, the angrezi log, truly they are born fighters, grim and determined in battle lions like us, however small they look. And truly is it the only joy ensured to children of great fighters to fight for them.’ (Anand 108)

Moreover, in the Indian subcontinent recruits of the Angrezi Sarkar left no stone unturned to lure the poor and needy young Indians.

The recruits are at your doorstep.

Here you eat dried roti

There you’ll eat fruit

Here you are in tatters

There you’ll wear a suit

Here you wear worn out shoes

There you’ll wear boot(s)... (Jalil 214)

At the outbreak of the Great War, one portion of the Indian Army was drawn from Punjab. The possibility that Indian soldiers were to fight battle against European enemy on the western front had been collected by influential men with their intimidating speeches. These men were strict pioneers like Muslim Pirs, the Bedis, Rajas, nawabs, big landowners, district level to village level authorities worked relentlessly. They were given quantities of share. The more they contributed the more rewards they got. There was a lot of pressure utilized. The young would escape the specialists as they were taken away. In this way a large-scale corruption occurred. More than 60,000 Punjabis — Muslims, Sikhs and Hindus — were murdered in real life in the First World War.

The Britishers always gave priorities and importance to people familiar with English language. In a situation when Deputy commissioner was chased by a buffalo but saved and the whole incident took place in front of few village boys including Lalu. While Lalu enquires and greeted him he was impressed and he was relieved in a sense. “Good morning, sir,” he said, ‘the buffalo didn’t mean any harm. She belongs to us and she is quite docile.’ ‘But you talk English,’ the sahib said, changing the subject with a blush. ‘come to the Durbar in the afternoon then.’” (Anand 163)

The Britishers were very concerned about the hygiene and the living environment. They always tried to show and spread a spacious way of life. They were very much attracted towards luxuries and so they suggested and reviewed Indian villages and other places where they find it necessary.

I have some plain speaking to do today, to you, Sardar Sahib, who are the head of this village, and to you, my old friends and my young friends. Please don't be angry. Since I have come down to your village, I have inspected its different parts, and I think it is an awful place to live in. It is unhealthy. That is why you are always ill half of the year, and why your women die in childbirth and your children are either stillborn or have sores all over the bodies. I have counted fourteen rubbish heaps in the vicinity of your village and three big and small dirty tanks, all of which receive their water from the black, smelling sewers which flow down from your lanes alleys. Your overcrowded mudhouses are crumbling to pieces. Your wells are dangerously near the drains and must receive all the mud and slush of your narrow streets when the rain falls. You have no open spaces outside your village for you to take the air or for your children to play. Your village then is a place fit only for animals to live in, and if that be so, since you live here in this dirt you are all animals and not men. (Anand 172-73)

Anand was a very creative writer and sometimes he used symbolic comparison with the Britishers. He mocked the appearance of a land lord in such a way which speaks a lot.

Meanwhile the household of Sardar Bahadur Harbans Singh, the landlord of Nandpur, was conducted into a large tent pitched under the scanty shade of a pipal tree under the direction of no less a person than the sardar Bahadur himself, a white-bearded, stout, little man, cursed by god with leucoderma – a disease that made his face the colour of an Englishman in the tropics, and endorsed it with disfiguring patches of brown into the bargain! (Anand 101-102)

Participation at War

“Is the war taking place there? a sepoy asked. No one answered him as most of the sepoys did not know where the war was.” (Anand 293) This was the condition of sepoys when they arrived at Marseilles, they were unaware of the place where they will encounter war. Moreover, the meaning of war to them is different. They were fighting a war at a different level at home they faced oppression, exploitation, false accusation, caste system, manipulation and other struggle related to survival. Here they were brought to fight for the Britain and the French against the Germans. This war is not a war of the Indians. Moreover, Indians were neither equipped with arm and ammunitions nor with any war fighting skills. They were not even aware whether they were in England or France as they were not acquainted with the geography of France or England. “where is France?” ‘Is that England?’ ‘Where is the enemy?’ ‘How many miles is it from here?’...Now one of them was asking ‘Is the war there?’” (Anand 294)

Every war is ironic because every war is worse than expected. Every war constitutes an irony situation because its means are so melodramatically disproportionate to its presumed ends. In the Great War eight million people were destroyed because two persons, the Archduke Francis Ferdinand and his Consort, had been shot. (Fussell 8)

Lalu went to war in the pretext of being saved from the false accusation and charges against him of catching hold of landlord Harbans Singh's daughter Maya and trying to spoil her. Exploitations of peasants and their families are the greatest war Indians were fighting against the Britishers. But ironically Lal sing escaped village to join army where he will be serving the Britishers in their battle which he is not aware of. This kind of description is hardly found in other writers. The Indians were displaced due to internal wars that were going on. His identity as a Punjabi was changed on account of short hair and enlisted as a Hindu Dogra, he was not excited as a similar incident occurred when he cut his long hair and punished by blackening his face and seated on a donkey made him go through the entire village.

...Arjan Singh, the walrus-moustaced priest of the Sikh temple, brought forward a donkey, shouting, 'Look, ohe, people. This rogue has spoiled our religion, disgraced the village. I know why he never came to the birthday ceremony of Guru Nanak. I knew. Teach him a lesson now. It will be a lesson to all the disreputables of the village.' (Anand 126)

While Lal Singh was on the French soil for the Great War, he noticed the similarities between them and Indians, their culture, their emotions, and their daily activities. War was an experience of foreign knowledge for Lal the protagonist. Anand refers back to the ancient Indian war while talking of war and referring to Black waters "...the war beyond the black waters was only another Mahabharata because the Angrezi Badshah was a cousin of the Badshah of Girmany, just as Pandus were cousins of the Kurus." (Anand 271). The observations Lal made were very true and exact. Anand did what no writer of his time could do, through the character of Lal he scanned the entire socio-political scenario of the French as well as Britishers. He presented the ground realities through the eyes of an Indian. His characters in the foreign land always tried to compare their surroundings with their native place. They could not relate much though but emotions are same at all places. The impact of war is felt on both sides. While talking in a group the Indian sepoy were comparing the Britishers and the French and they were impressed by the behavior of the French soldiers "But they were kind and polite, these Francis, bowing and smiling and moving their heads, their hands and their bodies in broad gestures, unlike the reticent Tommies." (Anand 297).

Lal while looking at the surrounding he noticed the places, people and the condition they were in and he could find a similarity between them.

Lal scanned the faces by the cafes, the dock gates, the huge sheds and warehouses with tear-dimmed eyes. An irrational impulse was persuading him to believe that the dirty, squalid outskirts of this town were a replica of the outer fringes of Karachi Harbour. The presence of trams, motors, ships, ships, moorings and masts encouraged the illusions. And, as he peered into the narrow filthy lanes where women and children stood crowded in the windows and on the doorstep, under lines of dirty washing, as he saw the small, languid, unkempt Frenchmen in straw hats and with

flourishing moustachios, it all seemed so like the indolent, slow moving world of an Indian city that he felt an immediate affinity with this country. (Anand 299)

Though the soldiers were displaced from home they always hide a feeling to return to their home as soon as the war is over. They always place their native place at the top. Anand also showed the geographical locations and the places and where the soldiers resided and confronted the enemies. While taking a round around Marseilles Lalu and his counterparts commented and discussed about the places and compared them with native place.

Lalu rushed up and saw the stream on the right, flowing slowly, gently, and shouted: 'River!' Everything is small in these parts,' Kirpu said. 'Look at their rivers- not bigger than our small nullahs. Their whole land can be crossed in a night's journey, when it takes two nights and days from the frontier to my village in district of Kangra. Their rain is like the pissing of a child. And their storms are a mere breeze in the tall grass....' (Anand 318)

Another one a Dogra from Srinagar he liked the city with his home town and he compared it in a way he could. "Why, it is just like Srinagar, this city, built on two sides of a river. Look, there are boats on it too like the house boats of Srinagar.'" (Anand 319)

One most important things Lalu noticed is the equality of people in there. Everybody is equal and have similar access and right to every facility unlike India doomed by caste system, patriarchy, rich-poor and so on and so forth. "Look, look there are two sweepers drinking wine by two Tommies, and also a woman!' said a sepoy naively. They have little religion or shame! 'there are no untouchables in this country,' said Kirpu firmly. 'And there is no consideration of pollution.' (Anand 319) Through this instance Anand tried to show his concern for a greater good of the society. We can in instance say he tried to convey message to his readers that men, women sweepers are all equal. These are few of the good sides war in the trenches taught our soldiers amid the atrocities and anxiety caused by the violence of the war and displacement.

Indian has a preconceived idea about the Britishers that they know everything and they are superior to anyone, but that idea was proved wrong during their stay at France for war. "So even the Tommies don't know the language of the Francis!' Uncle Kirpu sai. (Anand 324)

When the sepoys were moving to other locations of war by trains, they halted in different stations to carry soldiers. In one of the stations, they noticed women crying and they were amazed at it, because they have never seen a gora women cry. "Some of the women were crying even as his mother had cried when he had left home after the holiday..., for he had never seen the sahibs behave like this. Somehow the English in India always concealed their emotions." (Anand 359)

In the middle of the war where everybody was scared of the war and death that is yet to come to them, a news of further divide devastated them. Each moment seems like to Lalu to be his last for the bullets came speeding fast, invisible and deadly from the sound of them. The 69th battalion

which belonged to Indian sepoy were asked to get prepared for divide. “All ranks! Attention! Half the battalion will be attached to the 4th Cavalry Brigade under General Bingham. The other half will be attached to 5th Cavalry Brigade under general Chetwoode!” (Anand 379)

The soldiers they faced rigorous mental as well as physical tortures during the war time. War is not about the violence, killings and bombing shells of bullets on the opponent and claiming victory. To keep going on food is an essential amenity. They were not provided quality foods. The sepoy complained about the food to the cook but in response he said “It is difficult to light a fire Maharaj!” (Anand 394) The cook also shared the difficulties he faced as he was travelling with the soldiers and there were no kitchens left for them in the trenches. They had made one in order to prepare food. Sleep in the trenches was a myth, the rain fills the trenches, the fear of enemy’s gun, and the excessive cold all these made it very difficult for the sepoy to sleep. Everything was distorted and hopes withered in the trenches. A thick ragged blanket of darkness seemed to cover them as they inclined to the earth. The smoke of guns had mixed with the curtain of rain. The sepoy were not trained so before fighting they used to remember the tactics of firing or bayonet fighting, like a school child recalling lesson just before entering the examination hall. The sepoy had problems more than any solutions and they are left with no choice but to accept fate. The communication problem also made it problematic for the Indian soldiers to mediate and take lead. So, in a way, the English language was considered perfect to demonstrate an ideal language in the trench war fare which is present in Anand’s *Trilogy* but it is explained in a much deliberate way by Paul Fussell.

One of the cruxes of the war, of course, is the collision between events and the language available-or thought appropriate- to describe them. To put it more accurately, the collision was one between events and the public language used for over a century to celebrate the idea of progress. Logically there is no reason why the English language could not perfectly well render the actuality of trench warfare: it is rich in terms like blood, terror, agony, madness, shit, cruelty murder, sell-out, pain and hoax, as well as phrases like legs blown off, intestines gushing out over his hands, screaming all night, bleeding to death from the rectum, and the like *blood, terror, agony, madness, shit, cruelty, murder, sell-out, pain and hoax, as well as phrases like legs blown off, intestines gushing out over his hands, screaming all night, bleeding to death from the rectum*, and the like. (Fussell 184)

Post War Scenario

The participation in war and returning home was a very rare moment and proud moment. We must say there are some exceptions. Lalu was captured by the Germans and held prisoners of war there. After his release he directly went to his regiment the 69th Rifles. There he found everything to be

the same except the behavior he received from the officers. He was enquired and asked if he was prisoned by the Germans. He was destroyed by the response of the officers. The hope with which he joined the army has shattered and he was broken in every aspect.

Discipline demands that you should be demobilized. But on the recommendations of jamadar kulshi Ram, I have allowed you a certain latitude. I shall demobilize you on pension. I think you are lucky to be going back to your village, and I feel sure that you will make a good farmer...’ ‘without a farm!’ Lalu wanted to say, ‘without the reward of a square of land that had been promised to each soldier, without the good conduct medal, without...’ (Anand 588)

He was filled with humiliation grief and crisis of an identity. He left the office without collecting the pension slip. He said “I don’t want the dirty money of a Sarkar” (Anand 589) and went away deciding a conflict against them. On the way home he crossed several places and encountered various narratives of the exploitation by the Sarkar. Somewhere draught, somewhere money famine and chorus of conditions that made Lalu think ok doing something for his nation. While he reached Nandpur with one of his friends Gughi and came to discover the death of his mother. His brother being hung, their land being auctioned. The shock of these series of bad news made him in to a blind force who wanted to go and destroy his enemies in revenge. The whole atmosphere of the village changes and Lalu could sense that. The villagers were discussing times have changed and due to need, there are thefts of cattle and other things. Gughi and Harnam Singh, Lalu’s uncle were talking about their rebel club and they were thinking of involving Lalu in their group. There were few groups in the village that rose up against the atrocities done by the Goras. Among the protesters they tried to create a sense of unity among themselves irrespective of religion, caste, creed.

Many people realized that everything happens for greed and poverty. The rich manipulates the poor, greed is the only cause that created hatred for war. Lalu joined the revolutionary group and travelled to Allahabad and the united Provinces along with Maya, the daughter of the landlord. He met different people they had discussions about various ways they could overpower the Britishers using brotherhood and unity among the peasants and other people suffering. Lal Singh got trainings to hold meetings and give public lectures, he was very smart and he knew English too and his experience in the trench warfare added charm to his character and quality of qualification. “And they immediately begin began to plan the revolution: Verma Sahib was to go to Allahabad to arrange for the publication of *Naya Hind*; Ram Din was to explore the possibilities of fiancé; while Lal Singh was to arrange a meeting of peasants who would gather on the banks of the Ganges on the impending festival of the eclipse of the sun”. (Anand 689)

After having an articulation of *Naya Hind* Lalu and his comrades they were planning to have a peasant agitation and they were in the hope of getting help from the Indian National Congress. But the problem they encountered is that their ideologies differ from each other. The aim of both of

the groups is freedom but their ways to get it is different. They realized that Revolution cannot be brought by saying it a thousand times a day but it needs a dedication devotion and over all we must understand what we are going to deal with. The people they were aware of Russian and their theory of sovereign state and for the Indians India is a colonial state and it has a heap of problem from nationhood to the caste problems. Side by side peasants were also contributors and side by side their revolution should go on with the freedom struggle. Mahatma Gandhi was a prominent figure at that time and people listened to him very much, he says it clear “Our aim is freedom and our method is non-violence!”. Lalu approached Mahatma Gandhi for joining them and appraise them the path and lead them. When Lalu meet Gandhi, he was not given a chance to speak and Gandhi started his talks and continued till Lalu gets irritated. He even said that people come to listen to him not to talk much. Lalu also realized that there is much about revolution and it is a very broad and wide area of concept. At Lalu’s several interruption Gandhi felt disturbed and asked him directly his intentions “what do you expect me to do about it?” the Mahatma said abruptly, as if Lalu were disturbing the routine of his more important world activities.” (Anand 760)

When Lalu talked about the peasant and their revolution Gandhi gave him beautiful knowledge about the system in which it is done “Your advice to them was utterly wrong in my opinion,’ the Mahatma said, his face contorted with a painful impatience, ‘even if it succeeded in holding the enemy at bay. Strength does not come from physical force. It comes from the will. Non-violence doe not mean submission to the will of the evil doer, but of pitting one’s whole soul against the will of the tyrant. Working under the law of our being it is possible for a single individual to defy the whole might of an unjust empire and lay the foundation for that empire’s downfall or its regeneration.’” (Anand 760) Lalu requested to address his peasants but Gandhi put forward his conditions of attending the meeting. He said everyone should eat together they should not practice untouchability and there should not be any religious divide. This basically shows the way Mahatma is trying to unite India at a mass level without any inter conflict and clash.

These events and the revolution went on and it created a voice of resistance among the people and the peasants. The fear of being killed has vanished and everybody has an aim of taking Independence from the colonizers. Lalu and his other fellow comrades were arrested. Maya gave birth to a baby boy and Lalu celebrated his birth from jail. Lalu had visons of free and Independent India and he left no stone unturned to start revolution from inside prison cell too. “We followed the shadow and forgot the substance. Come, worthy little people, come, we will now make a real revolution! Come, we shall work day and night and learn how to make a Revolution... (Anand 936)

Conclusion

War has various dimensions and Anand in his *Trilogy* has shown diverse types of war. He was not a supporter of war which is proved. He has picturized various level of dislocation and the

consequences. War has mostly wastage, loss, destruction and deaths. Anand has not manifested much violence in his book which is again an indication of how he disliked war. On the other hand, we must say he is in a way indicating the positiveness of war. He talks about world level war, country-level war and village level war. He intertwined everything and justified a connection with brotherhood that was created due to the war. This led to a revolution and a change in the atmosphere of the society. Sometimes war and arms struggle are necessary for revolution and independence because it is the law of war. In spite of war, struggle and destruction life exists and brotherhood flourish. The description of revolution goes on and it is visible through the birth of Lalu's and Maya's son.

Bibliography

Alan Kramer, and Bill Nasson, issued by Freie Universität Berlin, Berlin 2016-01-11. DOI: 10.15463/ie1418.10798. Web.

Budgen, David: Literature (Version 1.1), in: 1914-1918-online. International Encyclopedia of the First World War, ed. by Ute Daniel, Peter Gatrell, Oliver Janz, Heather Jones, Jennifer Keene, Alan Kramer, and Bill Nasson, issued by Freie Universität Berlin, Berlin 2018-06-29. DOI: 10.15463/ie1418.10329/1.1. Web.

Fredric, Jameson. War and Representation, *PMLA*, Vol. 124, No. 5, Special Topic: War (Oct., 2009), pp. 1532-1547. <https://www.jstor.org/stable/25614383>. Web.

Lal, Dr A. "Ancient Indian Warfare." Ancient History Encyclopedia. Ancient History Encyclopedia, 30 Nov 2018. 14 May 2020. Web.

'Life- Writing' from Below Letters, Poems, Prayers and Songs of Sepoys in Europe, 1914– 1918 <https://www.cambridge.org/core/terms>. <https://doi.org/10.1017/9781139963244.006>. Web.

Omissi, David: Sepoy Letters (India), in: 1914-1918-online. International Encyclopedia of the First World War, ed. by Ute Daniel, Peter Gatrell, Oliver Janz, Heather Jones, Jennifer Keene,

Volker R, Berghahn. (2012) The origins of the First World War, *First World War Studies*, 3:1, 122-124, DOI: 10.1080/19475020.2011.613249. Web.

Yadav, Dr. Shashi. Critical Analysis of Protagonists of Mulk Raj Anand's Novels. www.ijtra.com Special Issue 10 (Nov-Dec 2014), pp. 75-77. Print.

Works cited

Anand, Mulk Raj. *The Trilogy*. Vison Books. 2016. Print.

Fussell, Paul. *The Great War And Modern Memory*. Oxford University Press. 2013. Print.

Jack, George Morton. *The Indian Army on the Western Front*. Cambridge university press. 2014. E-book.

Jalil, Rakhshanda. *The Great War*. Bloomsbury publication India. 2019. E-book.



Status and Performance of Handloom Industry: A Case Study of Kamrup District of Assam

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Abstract

Handloom production is providing supplementary income in most of households in rural Assam. Possibility to engage all family members, household based and labour-intensive characteristics makes this sector more suitable to rural structure of Assam. Also, the sector has the attribute to address women's empowerment directly. Assam, the state of North East India has the highest concentration of weaver in the country. Next to agriculture, this sector identifies as the second largest employer in the state. The handloom industry is largely environment friendly generating sustainable income to society. It has been well established that handloom products have a promising role to play in the textile market. Given adequate support and protection from the government; it has enormous possibility to develop a very large market. Here, an attempt has been made to discuss about the status and performance of the handloom sector in relation to various factors coupled with this sector.

Key Words: Handloom industry, weavers, women empowerment, performance, profit

1. Introduction

Handloom is a rural based, age-old cottage industry which inevitably linked with Assamese rural people, their culture and their livelihood, where spinning, weaving and required activities are done only by hand. The spinning and weaving activities were the part of tradition and culture of every Assamese household from the days of "Ahom" regime. Assam, the state of North East India has the highest concentration of weaver in the country. Next to agriculture, this sector identifies as the second largest employer in the state. According to 4th National Handloom Census (2019-20), more than 12.83 lakh weavers and 12.46 lakh handlooms are available in the state. The state had an estimated no of 1,59,577 full time weavers and 8,90,612 no of part time weavers during 2021-22 (Economic Survey Assam,