

The Ban of Non-Timber Forest Products collection effect on Soligas migration in Biligiri Rangaswamy Temple Wildlife Sanctuary, India

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Abstract. *The livelihood of tribals depends on forest resources and they have been living in the forest from time immemorial. The major sources of income for the Soligas are from Non –Timber Forest Products, subsistence agriculture, and labour. The Non – Timber Forest Products collection was banned in 2006 under the Wildlife Protection Act, 1972 in the Biligiri Rangaswamy Temple Wildlife Sanctuary and it affected the livelihood of the Soligas as they did not have any alternative employment. 32.5% of the Soligas migrated to different places of Kodagu, Tamil Nadu, and Kerala, as well as to nearby coffee estates and villages for employment. Soliga families migrate from 10 to 300 days in a year which has affected the children's education, culture, health etc. The migration continues due to the influences of outside culture and lack of employment opportunities in their areas. The study will focus on the problems faced after the ban of the NTFPs, places of migration, reasons for migration, number of days of migration, wage rates, size of male and female migrants, types of work, and income produced from the migration.*

Key words: Soligas, Migration, BRT, NTFPs, LAMPS

Introduction

The Soligas livelihood has been dependent on forest resources for centuries. They collect different types of Non-Timber Forest Products (hereafter NTFPs), do subsistence agriculture and labour. 61 Podus of 12500 of Soliga tribal live in the Biligiri Rangaswamy Temple (hereafter BRT) Wildlife Sanctuary of Chamarajanagara district, Karnataka, India. Among the Soligas, few families have small sizes of landholding and around 40% Soligas are landless. The agricultural practice is dependent on the rains and they do not have alternate irrigation facilities. The agricultural income lasts for around four to five months and for the remaining months they have to depend on the NTFPs and labour work. The NTFPs collection was stopped in 2004 and was strictly enforced in 2006 under the Wildlife Protection Act, 1972. It adversely affected the livelihood of the Soligas and the government did not provide any alternative employment. Due to the NTFPs ban, the Soliga families started to migrate to other places for employment. They faced problems relating to health, education, lack of food, cloths, etc. Some of studies mention that NTFPs provide 58% of their income for the Soligas (Madegowda, C., 2002). The Soligas depend on the harvesting of NTFPs to meet as much as 60 percent of their cash incomes (Hegde et

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al., 1996). The forests of B.R.Hills are primarily a source of income to the Soligas through the collection and sale of NTFPs- mainly Honey, Lichen, Nelli, Antuvala, and other products. The tribal society, LAMPS takes care of the marketing of the NTFPs collected by the tribals in the sanctuary (Narayanaswamy, K.M., 2003). The livelihood dependence on NTFPs in the three sites differ markedly. The community residing at B. R. Hills derives nearly 59% of their total cash income from NTFPs, in Nagarahole it amounts to 24%, and that of MM Hills - 16% (Umashanker R. et al., 2004). Traditionally, the Soligas were hunters and shifting cultivators and collected a wide range of Non Timber Forest Products (NTFP). When the BRT area was designated a wildlife sanctuary in 1972, shifting cultivation and hunting was completely banned, and the Soligas were allocated small pieces of land to practice settled agriculture. The Soligas retained the sole right to NTFP extraction under the aegis of the tribal cooperative called Large-scale Adivasi Multi-Purpose Societies (LAMPS). LAMPS were set up by the Indian government for an integrated tribal development through the marketing of NTFP in regions with significant tribal populations (Siddappa Setty R. et al., 2008). Besides NTFPs and traditional agriculture, forests are also an indirect source of income. Soligas are employed by the Forest Department in the maintenance of roads and various forestry operations such as clearing of weeds and control of fire. Nature- based tourism, controlled by the Forest Department, also contributes to the income of a small minority of households. Sustainability of land for these local communities is thus based on both sustainability of forest resources use and sustainability of land under agriculture (Kamaljit S. Bawa et al., 2007).

Section 29 of the Wildlife Protection Act, 1972 was amended with effect from 1.4.2003. This section was substituted by Act 16 of 2003. The amended provision reads that “No person shall destroy, exploit or remove any wildlife including forest produce from the Sanctuary” provided that where the forest produce is removed from a sanctuary, the same may be used for meeting the personal bona -fide needs of people living in and around the sanctuary and shall not be used for any commercial purpose” (PCCF letter 2004) The declaration of the BRTWS in 1974 forced these people in to a complete change in their lifestyle and made them more sedentary. Post-declaration, the Forest Department established Podus/colonies of 10-60 households on the periphery of the forest to settle the Soligas, banned shifting agriculture and hunting. The Soligas have since then adapted to these changes although NTFPs collection remained a major sources of cash income, but was banned in 2006 following an interpretation of a Supreme Court ruling banning the removal of anything from wildlife sanctuaries (Sushmita Mandal et al., 2010). They were allowed to practise shifting cultivation and were engaged as labour in various forestry operations. Primarily a hunting-gathering tribe, the Soligas gave up hunting but continued to gather forest produce, including honey and lichen. With no more than an acre per family (that too, not for all families) to practice subsistence agriculture, they mainly grow ragi and coarse cereals. In this era of market economy and vast food banks, the Soligas still do not like to store grain and depend upon income from the gathering of forest produce for nearly nine months (Nitin Sethi, 2004). An indigenous community, left in the hamlet Soligas, literally meaning the "bamboo children" are known for their environment-friendly practices and sustainable collection of minor forest produce. But most have migrated in search of livelihood since the government banned the collection of Non Timber Forest Produce like honey, lichen, amla, soapberry, and soapnut which was their main source of income, about two years ago. The same story can be seen in other hamlets inside the sanctuary in the Western Ghats. The produce collected by the tribals is sold through multi-purpose societies in BRT, Chamarajanagara, and Hannur to the highest bidder. There are some 16,000 people in the sanctuary's core area who depend on the income from selling forest produce and subsistence agriculture. They are migrating on a large scale (Ravleen Kaur, 2008).

Indigenous peoples that migrate to urban areas face particular and often additional challenges, most prominently unemployment, limited access to services, and inadequate housing. In addition, indigenous peoples in urban areas may experience discrimination and have difficulty in sustaining their language, identity and culture, and educating future generations which can result in a loss of indigenous heritage and values (United Nation Permanent Forum of Indigenous Issues Report, 2012). The number of households engaged in NTFP collection for domestic use was 97 % before the ban and 59 % after the ban. Only 23 % of the households now collect

tubers, greens, and honey, compared to 95 % before the ban, and 35 % only collect firewood showing that the share of households not collecting anything from the forest for domestic use after the ban is 41 %. As the Soligas were highly dependent on NTFPs for domestic use, the ban has led to a significant increase in cash dependence, now that they have to spend money on purchasing commercially available equivalents, or if they have no money they have to manage without the products. Several respondents were complaining that they could not fulfill their basic needs without the NTFPs for domestic use (Pernille Sandemose, 2009). Earlier, the tribal people were largely dependent on the forest for their livelihood. People used to eat fruits, roots or Mahua flowers, etc. But in the present day due to dwindling forest resources and restrictions imposed by the government in cutting forests, the livelihood of the tribal community has become restricted. That is why they are in search of alternative means of livelihood (Prashant Kulkarni, K.C. et al., 2008). Migration, apart from depicting the economic plight of the concerned group, has severely impacted the socio-cultural aspects of the Adivasi community. Migration also affects the socio-linguistic and cultural fabric of a community. In the place of destination the migration population is getting alienated from their traditions and customs and is forced to adopt the practices of the new locality (Ranjit P.Toppo and Sudeep Kumar, 2012). The BRT Wildlife Sanctuary is not an isolated example. A recent study revealed that thousands of families in various protected areas of Odisha too have suffered a similar fate. In the Baisipalli and Satkosia Sanctuaries, the ban on NTFP collection has reduced an already thin earning, by 50 to 90 per cent. Many families are migrating to find work, which has a serious impact on the social life and increases the chances of exploitation. The government has provided no alternative solution to this problem (Ashish Kothari, 2007). Approximately 12,500 (total population 30,000) Soligas live inside BRT and have been doing so for centuries, growing a little food and relying heavily on NTFP sales for daily sustenance. Their close link with the forests has given them a deep knowledge of ecology. Till the ban, the Soligas had usufruct right to collect NTFPs and sell them to their own co-operative LAMPs (Large-scale Adivasi Multipurpose Society) which in turn would auction them to the highest bidder. But families are now facing starvation. Facing a livelihood loss with the NTFP ban, family members now have to commute long distances in search of seasonal and menial jobs (Keya Acharya, 2007).

Study area and Data collection

The study was conducted in the BRT Wildlife Sanctuary of Chamarajanagara district, in Karnataka, India. The BRT Wildlife Sanctuary is spread over 574.82 sq kms and it has diverse flora and fauna. The indigenous tribals of Soligas have been living here for centuries and their major livelihood depends on the NTFPs of honey, lichen, amla, soap berry, and making broomsticks, etc. as also subsistence agriculture and labour work. The Soligas worship nature and in their cultural festivals sing the songs of the forest trees, flowers, birds, wildlife, water, agriculture, rain god, goddess, etc. and this knowledge is passed from one generation to the next generation. The study is based on primary data, obtained from 370 household surveys of 36 Podus of the total 61 Podus. A structured interview schedule was used for the collection of data from the household heads. Simple average methods, percentage, frequency, and statistical tables and graphs are used for the analysis of the data.

Results and discussion

Different types of problems faced after the NTFPs ban

After the NTFPs ban the Soligas faced different problems for livelihood like unemployment and wage problem, food, income, migration, and health problems. The table explains the different types of problems faced by the Soligas during the NTFPs ban periods.

Table 1
Different types of problems faced after the NTFPs ban

Types of problems	No. of opinions			
	First	Percent	Second	Percent
Unemployment and wage problem	366	99	0	0
Food	2	0.5	26	7
Income	2	0.5	31	8.4
Migration	0	0	34	9.1
Health problems	0	0	2	0.5
NA*	0	0	277	75
Total	370	100	370	100

* Not applicable

Table 1 show that in the first opinion, 99% of the respondents faced unemployment and wage problems. In the second opinion 9.1% of the respondent mentioned migration, 8.4% of the respondents opined facing lack of income, while 75% of the respondents did not give any response. On the whole the Soligas are facing unemployment, migration and health problems, etc. and there is a need for employment for the migrants.

Types of places for migration

The earlier Soligas lived in the forest and they did not migrate to different places for employment, but they did migrate within the forest areas in search of forest resources. Then more number of Soligas started to migrate in 2006 because the NTFPs collection was banned in the BRT Wildlife Sanctuary. The respondents' family members migrated to the nearby states of Tamil Nadu and Kerala, while some of them migrated within the state for employment. The table shows the number of people migrating to different places.

Table 2
Types of places for migration

Sl.No.	Name of the place	No. of respondents migrated	Percent
1	Bedaguli Coffee Estate	44	12
2	Tamil Nadu	10	2.7
3	Kerala	11	3
4	Kodagu	34	9.1
5	Are playa/Eranna katte	21	5.7
6	Not migrated	250	67.5
	Total	370	100

Table 2 shows that of the 370 respondents, 11.6% had migrated to the Bedaguli coffee estates and 9.1% had migrated to Kodagu. Totally, 32.5% of the respondents had migrated to different places for employment but 67.5% of respondents did not migrate.

The migration has a negative impact on the Soligas as it effects their children's education, culture, and health because when they migrate to outside places sometimes they take their children along with them, and it also affects their culture on the whole.

Reasons for migration

The Soligas migrate because they are unable get employment in their native places. After the restrictions on agricultural cultivation they could not get employment in the same places and since the NTFPs collection was also banned by the Forest Department in 2006, they did not have any alternative employment sources. The table explains the reasons for the migration expressed in two opinions by the respondents.

Table 3
Reasons for migration

Sl.No.	Reasons for migration	No. of opinions			
		First	Percent	Second	Percent
1	Unemployment	106	28.7	0	0
2	Low wages	11	3	0	0
3	Landless	3	0.8	7	2
4	NA*	250	67.5	363	98
	Total	370	100	370	100

*Not applicable

Table 3 shows that of the 370 respondents, 28.7% of the respondents had migrated because of unemployment and the other two reasons given were small in numbers, while 67.5% respondents did not migrate. In the second opinion two percent of the respondents expressed that they were landless and 98% of the respondents did not give any response.

It shows that unemployment is the major reason for migration along with low wages and possessing no land. So the government needs to provide employment and NTFPs collection rights besides land to the landless families as it would help the individual family income

Numbers of day's families migrated for employment

The respondent's families migrate for employment every year. They mentioned that for a minimum 10 days to maximum 300 days they migrated outside for employment. Soligas are not getting employment locally. This explains the number of day's migration for employment in a year.

Table 4
No. of days migrated for employment

Sl.No.	No. of days	No. of families	Percent
1	1-10.	4	1
2	11-20.	3	0.8
3	21-30.	23	6.2
4	31-40.	3	0.8
5	41-50.	15	4
6	51-75.	23	6.2
7	76-100	17	4.5
8	101-200	25	7
9	201-300	7	2
10	NA*	250	67.5
	Total	370	100

*Not applicable

Table 4 shows that of the 370 respondents' families, 7% of the families migrate up to 101-200 days in a year. 6.2% of the respondents families migrate 21-30 days in a year and same number of respondents families migrate 51-75 days in a year. Of the 32.5% respondent migrating families, 21.7% migration ranges from 41-50 days to

101-200 days in a year in the BRT Wildlife Sanctuary while 67.5% did not migrate.

It shows that most of the respondent families migrated for more than 41 -50 days or 101-200 days in a year indicating a lack of employment opportunities in the BRT Wildlife Sanctuary to which the government can provide a solution by providing employment in the local areas.

Types of wage rates received by migrants

The respondent families receive different types of wage rates per day in different places when they migrate to other places for employment. They migrate to Kodagu, Kerala, Tamil Nadu, Bedaguli coffee estate as well as to local places. At each place they receive different types of wage rates. The wage rate strata ranges from Rs 100-125 per day per person to Rs 276-300 per day per person based on the type of work and place. The table explains the different types of wage rates received by the respondents' family members.

Table 5
Types of wage rates received by the migrants per day in Rupees

Sl.No.	Wage rates per day in Rs.	No. of families	Percent
1	100-125	69	18.7
2	126-150	30	8.1
3	151-175	1	0.2
4	176-200	12	3.3
5	201-225	0	0
6	226-250	7	2
7	251-275	0	0
8	276-300	1	0.2
9	NA*	250	67.5
	Total	370	100

* *Not applicable*

Table 5 shows that of the 32.5% respondents' migrating, 18.7% received Rs. 100 -125 per day per person, 8.1% got Rs. 126 to 150 per day per person, and 3.3% got Rs. 176-200 per day per person. The majority, 26.8% of the respondents' had got wages ranging from Rs. 100-125 to 126-150 per day per person, while 67.5% of the respondent families did not migrate for employment.

It shows that most Soliga families received wages below Rs. 150 per day per person. Some 5.7% of the respondent families had got above Rs. 150 per person per day. The Soligas had received minimum wages which is not sufficient enough to sustain the whole family. Some of the respondents' families had received good wages based on the work and the place of work.

Gender wise distribution of family members migrated in respondent families

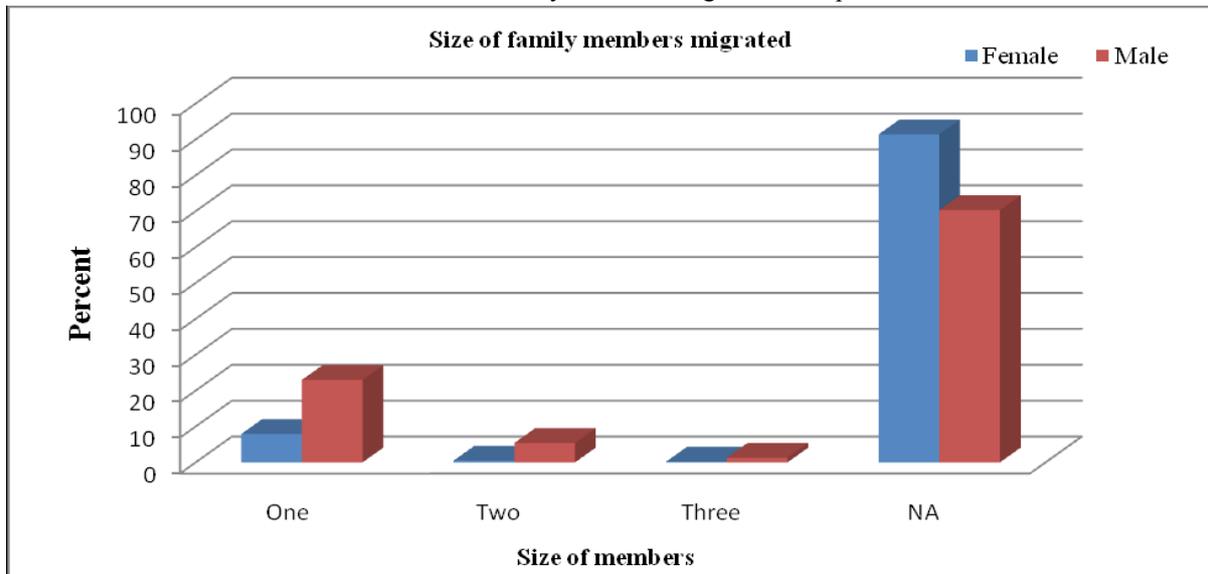
The Soligas usually migrate for employment when they travel outside. The migrants were heads of their households, sometimes husband and wife, sometimes sons or daughters, and also eligible adult members of their family. The figure illustrates the number of male and female members migrating ranging from one to three members in each family.

Graph. 1 shows that of the 370 respondent's families, 8.6% female members had migrated for employment of which 7.9% (one) female member had migrated while two and three female migrants are very less and 91.4% of the female members did not migrate. 23 % of the respondents' family, one male member migrates but two and three male members are less, and 70.3% of the respondents' family did not migrate for employment. It indicates

that Soligas male members migrate more as compared to the female members in the family. It also shows that male and female members migrate for employment and only few members within the family migrate, but mostly husband and wife migrate for employment taking their children along with them as it affects the children’s education while in certain cases one male member might migrate for employment as it affects the family relationship and also because they might have adopted the outside culture. So there is a need to provide employment locally as it would help the Soligas earn their livelihood and conserve their culture.

Graph 1

Gender wise distribution of family members migrated in respondent families

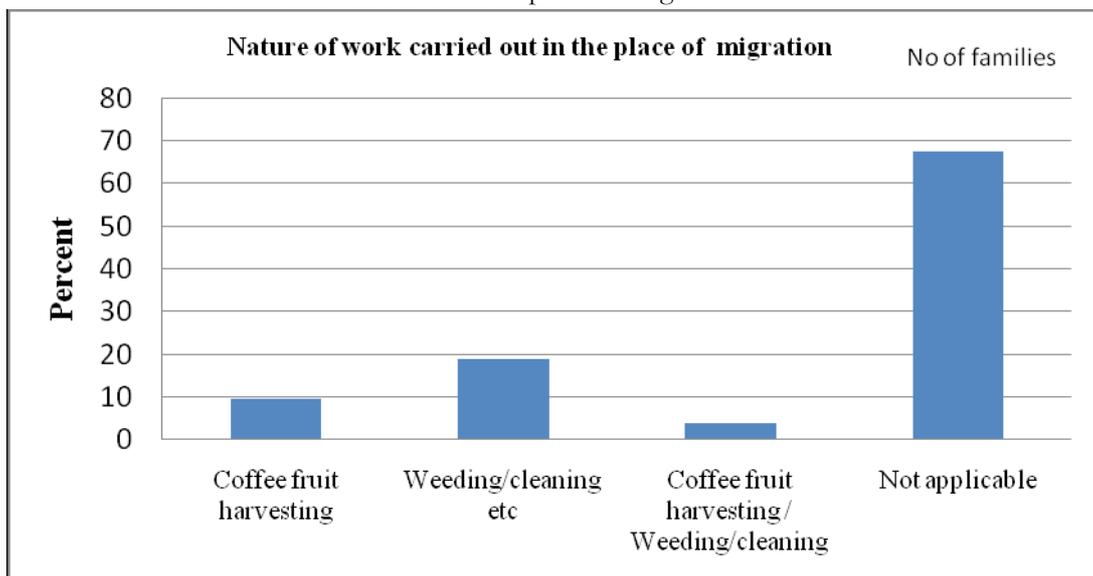


Nature of work carried out in the place of migration

The migrating Soligas work in coffee estates and on agricultural lands. Of the 370 respondents, 32.5% of the respondents’ families had migrated and were involved in coffee / fruit harvesting, weeding, and cleaning works. The graph below explains the types of work carried out by migrant family members.

Graph 2

Nature of work carried out in the place of migration



Graph. 2 shows that of the 370 respondents, 19% of the respondents had been involved in the coffee estate weeding, cleaning, and agricultural work. 9.5% had been involved in coffee / fruit harvesting activities, and the remaining respondent family members had been involved in both types of work while 67.5% of the respondents were not involved in any activity or migration. It shows that most of them were involved in the coffee estate and agricultural labour related activities. It indicates that most of them were involved in labour activities which required health facilities in the working place.

The scale of income received by the migrant families

The Soligas migrate for employment through which they receive an income. The scale of amount varies from Rs. 1-2500 to Rs. 25001-30000 per year per family. The table presents the scale of income earned by the migrant respondent families.

Table 6
Scale of income received by migrant families in a year

Sl.No.	Scale of income received by respondent families	No. of families	Percent
1	1-2500.	10	3
2	2501-5000	25	6.8
3	5001-7500	15	4
4	7501-10000	19	5.1
5	10001-12500	15	4
6	12501-15000	12	3.2
7	15001-20000	12	3.2
8	20001-25000	6	1.6
9	25001-30000	6	1.6
12	NA*	250	67.5
	Total	370	100

*Not applicable

Table 6 shows that of the 370 respondent families, 32.5% of the respondent families had migrated for employment. Of the 32.5% respondent family members, 6.8% had earned Rs. 2501-5000 per family per year, 5.1% had earned Rs. 7501-10000 per year per family, four percent had earned Rs. 5001-7500 per year per family, and 67.5% of the respondents did not have any migratory income because they had not migrated.

The average income earned by a migrant family amounted to Rs. 937.5 per family per year. It shows that the Soligas received minimum income which is not enough to maintain the whole family and hence is a need for employment.

Conclusion

The ban on the collection of NTFPs affected the livelihood of the Soligas and the Government failed to provide alternate employment to them. This caused 32.5% of the Soligas to migrate to Tamil Nadu, Kerala, and also within the state looking for employment. Both, male and female members had migrated and in some cases the entire family had migrated as it affected the children's education, but a few families left their children in their native places as it affected the children's education and also the child - parent relationship. The Soligas are adopting the outside culture and losing their traditional values. 25 Forest Rights Committees of 32 Grama Sabha have revived the NTFPs collection and other community rights as on October 2, 2011 under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest rights) Act 2006, and are now collecting honey and lichen in the BRT Wildlife Sanctuary. Migration still continues among the Soligas because of the lack availability of NTFPs due to the menace of the Lantana weed, rain, and changes in the ecosystem. Soligas are

able to gather NTFPs only for a few months and the remaining months they face unemployment. Therefore the Government should provide employment in their native places under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme as also irrigation facilities for their agricultural lands which would help the Soligas to earn their livelihood and also conserve their traditional tribal culture.

Acknowledgement

We would like to thank Mohan, A. K, Assistant Professor, DOS in Social Work, University of Mysore for inputs and encouragement and supports by Dr. Nitin Rai and Dr. Siddappa Setty, Fellows, Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore and the Soliga tribals of B.R. Hills for providing information for this paper.

References

- Ashish Kothari. 2007. Conservationists Vs Conservation. *The Hindu*. Indian's National Newspaper. Sunday.August. Chennai,India.
- Hegde, R. Suryapraksh, S. Achoth, L. and Bawa, K.S. 1996. Extraction of Non-Timber Forest Products in the Forest of Biligiri Rangana Hills, India,Contribution of Rural Income.*The New York Botanical Garden* , Bronx, U.S.A.
- Keya Acharya. 2007. Trouble brewing. *Deccan Herald*. November 20, Bangalore, India.
- Kamaljit, S. Bawa. Gladwin Joseph and Siddappa Setty.2007. Poverty, biodiversity and institutions in forest-agriculture ecotones in the Western Ghats and Eastern Himalaya ranges of India. *Agriculture, Ecosystems and Environment*, ELSEVI,Science Direct: 287-295.
- Madegowda, C. 2002. Tribal Participation in Collection of Non-Timber Forest Products in Biligiri Rangaswamy Temple Wildlife Sanctuary: A Study conducted in ChamaraJanagar District of Karnataka State. *M.Sc. thesis submitted to Sikkim Manipal University of Health, Medical and Technological Science*, Gangtok, India: 31-36.
- Narayanaswamy, K.M. 2003. Soliga Tribes, Forest and Wildlife in ChamaraJanagar district, *Published by Deputy Conservator of Forests, Wildlife Division*. ChamaraJanagar, Karnataka, India.
- Nitin Sethi. 2004. Stop trade, Special report. *Down To Earth*. September 30, New Delhi, India. Volume 13, No 9: 38-39.
- Pernille Sandemose. 2009. Local People and Protected Areas, The Ban of NTFP collection for commercial use and effects on cash incomes and livelihoods of the Soligas in BR Hills, India. *Master thesis*, Norway: 47.
- Prashant Kulkarni, K.C.Dasii and Virendra Pardeshi .2008. Understanding mobility among tribal population: A study in Andhra Pradesh, India. *Maharashtra Association of Anthropological Sciences (MAAS)*, Pune, India.
- Ravleen Kaur .2008. No return of the native, Home and features. *Down to Earth*. March1-15, New Delhi, India,Volume 16, No 20: 48-49.
- Ranjit, P'Toppo and Sudeep Kumar .2012. Development and Migration Of Adivasis. *Social Action*, April-June, New Delhi, India. Vol.62:183 -192.
- Sushmita Mandal. Nitin D. Rai and Madegowda, C. 2010. Culture, Conservation and Co-Management: Strengthening Soliga Stake in Biodiversity Conservation in Biligiri Rangaswamy Temple Wildlife Sanctuary, India. *Sacred Natural Sites: Conserving Nature and Culture*, Edited by Bas Verschuuren, Robert Wild, Jeffrey A. McNeely and Gonzalo Oviedo, Earthscan and IUCN ,London: 263-271.
- Siddappa Setty, R. Kamal Bawa. Tamara Ticktin and Madegowda,C. 2008. Synthesis, Evaluation of a Participatory Resources Monitoring System for Non-timber Forest Products: the Case of Amla (phyllanthus spp.) Fruit Harvest by Soligas in South India. *Ecology and Society* 13(2): 19 <http://www.ecologyandsociety.org/vol13/iss2/art19>.
- Umashanker, R. Ganeshaiyah, K.N. Smitha Krishnan. Ramya ,R.Meera ,C. Aravind, N.A. Arvind Kumar. Dinesha Rao. Vanaraj, G. Ramachandra, J. Remi Gauthier. Jaboury Ghazoul. Nigel Poole and Chinnappa Reddy, B.V. 2004. Livelihood gain and ecological cost of non-timber forest product dependence: assessing the role of dependence, ecological knowledge and market structure in three contrasting human and ecological settings in South India. *Environmental Conservation* 31(3): Foundation for Environmental Conservation:242-253.
- Report.2012. Urban Indigenous Peoples and Migration: Challenges and Opportunities. *Indigenous Peoples Indigenous Voice, United Nations Permanent Forum of Indigenous Issues (UNPFII)*. New York: 14 – 25.
- Letter. 2004. Principal Chief Conservator of Forests (Wildlife). *Department of Forests. Government of Karnataka*, Bangalore, India.