Why Sustainable Agriculture Management System may sometimes become weak or fail in a Tea Estate in India?

Souvik Banerjee
PhD Student
Department of Management,
Sri Satya Sai University of Technology & Medical Sciences, Sehore, India

Abstract : Obtaining a sustainable agriculture certification and following it's set standards have taken a front seat in majority of tea producing estates. But the success of the practice depends on mutual trust from all stakeholders including the neighbouring estates engaged in farming. However lack of motivation is a key issue which leads to gaps in implementation of the practice in totality. After initial implementation of sustainable farming practices the motivation drops and the system(s) may deteriorate. It´s vital to monitor status of implementation and motivation level(s) on local, regional and national level(s) to analyze changes and draw conclusions about their impact on the sustainable agricultural management system at the sectoral level

Index Terms **- Sustainability, Sustainable Agriculture, Tea**

I. INTRODUCTION

As defined by the Western Sustainable Agriculture Research and Education program (SARE) of Montana State University, "Sustainable agriculture can be defined in many ways, but ultimately it seeks to sustain farmers, resources and communities by promoting farming practices and methods that are profitable, environmentally sound and good for communities. Sustainable agriculture fits into and complements modern agriculture. It rewards the true values of producers and their products. It draws and learns from organic farming. It works on farms and ranches large and small, harnessing new technologies and renewing the best practices of the past."

Dr. John E. Ikerd, Extension Professor at the University of Missouri, offers his view of sustainability: "A sustainable agriculture must be economically viable, socially responsible and ecologically sound. The economic, social and ecological are interrelated, and all are essential to sustainability. An agriculture that uses up or degrades its natural resource base, or pollutes the natural environment, eventually will lose its ability to produce. It's not sustainable. An agriculture that isn't profitable, at least over time, will not allow its farmers to stay in business. It's not sustainable. An agriculture that fails to meet the needs of society, as producers and citizens as well as consumers, will not be sustained by society. It's not sustainable. A sustainable agriculture must be all three - ecologically sound, economically viable and socially responsible. And the three must be in harmony."

The growth of world market in an increase in consumer consciousness towards sustainability has forced the agricultural sector to look into sustainability at the core of it's business. Tea Estates, being a part of agricultural sector, has also awakened to the need for addressing sustainability issues. Consumer demands have also forced tea estates to develop management systems to address sustainability issues in the form of Sustainable Agriculture Management Systems (SAMS) which borrows the guidelines as set by various standard formulating bodies in published Sustainability Standards. Few such standard formulating bodies operating globally are Sustainable Agriculture Network (SAN), Rainforest Alliance, UTZ, Fairtrade International, Naturland etc. All such standard formulating bodies have also developed voluntary certification schemes coupled with periodic monitoring of certified tea estates through audits. The certification schemes recognizes the initiatives adopted by the tea estates in addressing the requirements as defined in these Sustainability Standards.

In India, the Trustea Standards established by Tea Board of India is the standard used by majority of tea producing estates, and application of Trustea requirements as a part of good manufacturing practices (GMPs) in tea production is on the rise. Export centric tea estates chose different internationally acclaimed sustainability agricultural standards like one published by Rainforest Alliance, UTZ, Naturland, Fairtrade etc. Many tea estates boasts of having multiple certifications for the implemented Sustainable Agriculture Management System.

Good Agricultural Practices (GAPs) are the first and inevitable step to sustainability certifications. Although GAPs and sustainability standards are discussed as specific elements they often do not have sharp border lines but are tangled with interfaces. Establishment of a sustainable agriculture management system is quite demanding in respect of human, technological and thus also on financial resources. Sustainability standards are sometimes implemented mainly with the objective of satisfying the requirement of authorities or buyers. Establishing Sustainable Agricultural Management System in such scenario gives very little chance of it becoming a meaningful exercise and there is a real risk that it will be seen as a burden by all personnel. For all tea estates, sustainable agricultural management system is a comprehensive process control system and it is, thus, an important tool in combating the worldwide escalation of pollution from agricultural practices. Consumers and other stakeholders are increasingly concerned about the continuing sequence of social and environmental scandals and incidents. Penetration of social and environmental hazards into tea production in an unexpected extent may suggest a system failure not only in the local production but

also at the national level. These scandals often obtain wide coverage in the news media and in publications and as a result, consumers are familiar with such scandals which impacts business. Our research shows that the tea estates are quite satisfied with the present status and do not intend to develop their sustainable farming controls further because they are resource-demanding. In the situation when both the production and the consumer environments are changing, any lag in sustainable farming system development may cause loss of its functionality. Evidence of leaks in the preventive function of the present sustainable farming arrangements may be seen in the recent BBC published documentary in 2016. Such scandals are significant because they reveal a problem in the execution of basic sustainable farming procedures.

The gradually changing attitude towards sustainability in agriculture may be one reason why this preventive approach towards sustainable farming is being downgraded by routine maintenance of already implemented measures and the preventive control system may slowly degrade to repressive operation practices and become "drawer" documents prone to fail if not completely surrounded by business partners with full-fledged management system. To prevent such a course of sustainable farming development requires another way to enforce the law, but all the activities have to be done very sensitively and with co-operation of all stakeholders.

II. MATERIALS & METHODS

This paper presents the results of a Sustainable Agriculture Management System field study that was conducted by means of an anonymous questionnaire survey. The survey was carried out from February 2018 to February 2019 with focus on tea estates in India. Most replies were gathered from tea estates from Eastern and North-Eastern states of India. An explanatory letter with questionnaires was sent via Internet and mail to fifty registered tea estates (all tea estates are registered by Tea Board of India). The final structure of the questionnaire is composed of seventeen questions. YES or NO choices were given for each question with a comment option to allow for better understanding of the producer's attitude towards Sustainable Agriculture Management System. The first part of the questionnaire asked about the establishment and implementation of Sustainable Agriculture Management System in the premises. The second part focused on attitude of the producers towards to Sustainable Agriculture Management System functionality control by audits and by controlling authorities. In the third part of the questionnaire, the respondents were asked about their opinion about sustainability related regulations.

The questionnaire was answered by twenty-seven from the fifty addressees. Although only twenty-seven questionnaires were available, we may say it is enough to serve the objectives of such a survey and allows us to formulate some conclusions.

III. RESULTS & DISCUSSIONS

Altogether, 54% of the questionnaires were received and filled correctly by respondents. The highest numbers of questionnaires were returned from Darjeeling Region (41%), the numbers of questionnaires received from Upper Assam (22%) is a bit higher than that received from Lower Assam (19% each) from Cachar (11%) and the lowest from Dooars and from South India (4% each). As for the size of surveyed tea estates in particular areas the situation is as follows (Fig.1). From Darjeeling Region, 5 small tea estates responded (57.1%), 4 middle scale tea estate (36.36%) and 2 big scale tea estate (18.18%). From Upper Assam, responses came from 1 small (16.67%), 3 middle (50%), and 2 big (33.33%) tea estates, respectively. All respondents were from small enterprises from Cachar, Lower Assam and South India, and 1 questionnaire was received from a middle scale tea estate from Dooars region.

The results were divided into three areas. Table 1 shows the answers of the questions about establishing and implementation of Sustainable Agriculture Management System in their premises. Table 2 shows answers to the question about attitude of tea producers to audits of the Sustainable Agriculture Management System and to official controls by authorities.

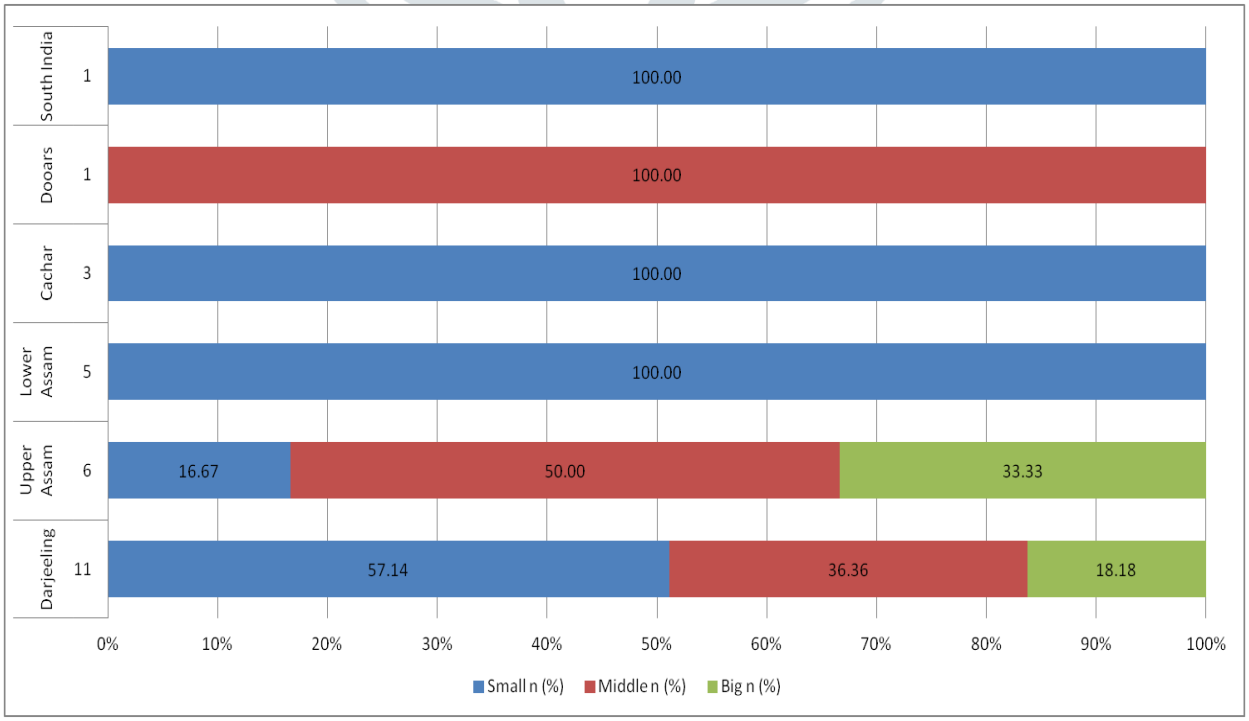

fig. 1 - percentage of companies (n = 27) which answered the questionnaire and graphic presentation of tea estates by size and by regions

Table 1. Part 1 of the questionnaire. Answers to the questions about the establishment and implementation of Sustainable Agriculture Management System in Tea procedures

Question	Answer n (%)		
	Yes	**No**	
Would you establish the Sustainable Agriculture Management System as a part of your agricultural practices in tea production if it were not duty?	18 (66.67%)	9 (33.33%)	
Did the controlling authorities help you with the Sustainable Agriculture Management System implementation?	25 (92.59%)	2 (7.41%)	
Do you think that the Sustainable Agriculture Management really improved the social and environmental compliance status of your tea estate?	20 (74.07%)	7 (25.93%)	
Since establishing did you implement any changes in your Sustainable Agriculture Management System?	18 (66.67%)	9 (33.33%)	
Did you establish the Sustainable Agriculture Management System by yourself or have it established by hired experts?	**Yourself** 15 (55.56%)	**Expert** 12 (44.44%)	
Since establishing have you been forced to modify your Sustainable Agriculture Management because of any changes in law?	**Production Conditions** 7 (25.93%)	**Change in Law** 6 (22.22%)	**By both** 14 (51.85%)

100% of the respondents had a fully operating Sustainable Agriculture Management system in place. Among them, about 67% of producers would establish Sustainable Agriculture Management anyway and less than 33% of the Tea Estates would not. Half of the (56%) respondents put Sustainable Agriculture Management system into practice by themselves. The controlling authorities were helpful with Sustainable Agriculture Management system implementation in more than 92% companies (Table 1). One of the main roles of the controlling authorities is to enforce labour laws for the benefit of consumers for whom social compliance is a key issue. Control of functionality of Sustainable Agriculture Management systems in tea production through audits gives an opportunity to improve the social and environmental compliance level. The attitude of the tea estates towards the audits is positive (>66%), and >74% of respondents agree that the Sustainable Agriculture Management has improved social and environmental compliance of their products. Many (>92%) tea estates admitted that the controlling authorities helped to correct imperfections in their Sustainable Agriculture Management systems. In the remaining facilities (>66%) the controlling authorities had no objections regarding Sustainable Agriculture Management systems functionality (Table 2). More than 66% of the tea estates have modified/corrected their Sustainable Agriculture Management system after it's initial establishment, solely due to the production process in >25%, solely due to changes in legislative in >22% of cases. More than 51% necessary changes have been forced into the Sustainable Agriculture Management systems by both technological and legal influences (Table 1).

Table 2. Part 2 of questionnaire. Answers to questions about attitude of tea producers towards the functionality improvements of Sustainable Agriculture Management System due to audits from the controlling authorities

Question	Answer n (%)	
	Yes	**No**
The role of controlling authorities is to control the functionality of the Sustainable Agriculture Management System by audits. Do you find the audits useful?	18 (66.67%)	9 (33.33%)
Did have controlling authorities sometimes complaints in relation to the functionality of your Sustainable Agriculture Management System?	9 (33.33%)	18 (66.67%)
Do you think that the audit to improve operations running in your tea estate?	19 (70.37%)	8 (29.63%)
Do you think you have enough technical requisites to ensure the functionality of Sustainable Agriculture Management System?	25 (92.59%)	2 (7.41%)

Communication about sustainability related scandals and their risk analysis is very important. A risk communication is a basic element of the risk analysis process, and according to FAO is an interactive process of rapid exchange of information among institutions and producers. Early and rapid warning about emerging social and environmental hazards by a functional system may/must lead to decrease in the social fragmentation outbreaks. Once the cause has been discovered, a rapid exchange of information during a crisis situation is very important. The majority of respondents (>81%) consider that the current communication about the potential hazards is sufficient. More than 88% of producers concurred that the Sustainable Agriculture Management System related regulations are sufficient but 92% of them think that the interpretation and enforcement of the law is not the same everywhere (Table 3).

Table 3. Part 3 of questionnaire. Opinion about current regulations in relation to Sustainable Agriculture Management System

Question	Answer n (%)	
	Yes	No
Do you consider a current communication about the social and environmental hazards across the industry sufficient?	22 (81.48%)	5 (18.52%)
Do you think that the current regulations are sufficient in relation to Sustainable Agriculture Management System?	24 (88.89%)	3 (11.11%)
Do you think that the current regulations are interpreted in relation to Sustainable Agriculture Management System everywhere as well?	2 (7.41%)	25 (92.59%)
Would you welcome changes to laws in relation to social and environmental issues?	17 (62.96%)	10 (37.04%)

IV. CONCLUSION

From the presented results it is obvious that there is lack of motivation in respect to the Sustainable Agriculture Management System implementation and maintenance. After many years of having the system, too many tea estates still have quite a negative attitude towards it. All of them have Sustainable Agriculture Management System established but it seems that its efficiency is degrading and the system has trend to fail the consumers. Communication between producers and controlling authorities becomes thus even more important. It is imperative to understand the open concept of sustainable agricultural practices and enforce the legal requirements without bureaucratic refusal of creativity. Discrepancies may and should be resolved by means of audits. Ignoring the fact that sustainable framing practices evolves will lead to loss of control over it and jeopardize its functionality, not only on the local level but on the national level too. The sustainable agriculture management system can be compared with check gates built to protect against floods. If they are constructed poorly, it may not be visible but water would find its way. Therefore constructions rules must be set and observed. If construction is build properly, it deteriorates in time anyway and therefore regular control and maintenance is vital to keep them functional. Those poorly built will deteriorate faster. If the check gates do not follow the river all the length, water will find it and flood even the protected regions below.

REFERENCES

[1] Ali, A. 2001.Macroeconomic variables as common pervasive risk factors and the empirical content of the Arbitrage Pricing Theory. Journal of Empirical finance, 5(3): 221–240.

[2] Basu, S. 1997. The Investment Performance of Common Stocks in Relation to their Price to Earnings Ratio: A Test of the Efficient Markets Hypothesis. Journal of Finance, 33(3): 663-682.

[3] Bhatti, U. and Hanif. M. 2010. Validity of Capital Assets Pricing Model.Evidence from KSE-Pakistan.European Journal of Economics, Finance and Administrative Science, 3 (20).

[1] *Ananda Bazar Patrika* (2013) State to Demand Rs.100 crore for tea gardens. 13th November, P-North Bengal-1.

[2] Banerjee, S. K. (2008) *The Rajah of Darjeeling Organic Tea, TOMSONG*. New Delhi Cambridge University Press India Pvt. Ltd.

[3] Burns, S. (2000) Keeping our Eye on the Goal – How To Measure Corporate Sustainability Progress [Online] Available from (www.naturalstrategies.com/publication/sb_epis.pdf) [Accessed: 20.07.2008]

[4] Chottopadhya, K. (2018) Timely information could have saved some life. *Ananda Bazar Patrika*. 31st July; p-4.

[5] Eurenius, H. et al. (2009) Creating sustainable development- A case study of Makaibari Tea Estate, Darjeeling, West Bengal, India [Online]

[6] Goodland, R. (1997) Environmental *Economics* [Online] Available [Accessed: 23.10.2018]

[7] Sustainability in agriculture: diet matters *Ecological* from http://ipidumn.pbworks.com/f/DietMatters.pdf [Accessed: 23.10.2018]

[8] *Green Peace* (2018) [Online] Available from http://www.greeneace.org/india/en/What-We-Do/Sustainable-Agriculture/ [Accessed: 23.10.2018]

[9] Beulens AJM, Broens DF, Folstar P, Hofstede GJ. Food safety and transparency in food chains and networks Relationships and challenges, Food Control 2005;16:481-86.

[10] Coxsall M. Ethical eating. A Complete Guide to Sustainable Food. First published in UK, Spain 2014. ISBN 978-84-941783-1-3.

[11] Webpage of Western Sustainable Agriculture Research and Education program (SARE) of Montana State University available on https://www.westernsare.org/About-Us/What-is-Sustainable-Agriculture, Accessed on March 1, 2019

[12] Justin Rowlatt, South Asia correspondent, BBC News, The dark history behind India and the UK's favourite drink, available on https://www.bbc.com/news/world-asia-india-36781368, Accessed on March 1, 2019