This project aspires to contribute to the discussion regarding the development of market linkages for bio-fuel seeds. More specifically, market linkages need to focus on establishing a long-term relationship between farmers on one hand and downstream agribusiness (processors, exporters and retailers) on the other. Also the provision of extension services such as finance, training, inputs, etc. enhance the development and capabilities which can stimulate the development of sustainable market linkages. However, there are high costs and risks associated with linking farmers to formal markets. Problems with regard to production costs and volumes, poor access to information, etc., raise the transaction costs of working with a large number of small farmers. In addition, the low production capacity of smallholders is an obstacle to achieve economies of scale. Close coordination of production is therefore a necessity to lower the transaction costs, raise efficiency and make the linkage sustainable. For this reason private companies usually prefer to work with organized farmers over individual farmers. That the production of smallholders needs to be coordinated is recognized in many commodity chains. There are many drivers that can support the coordination and integration.

Typical examples of such drivers are NGOs, lead firms or farmer cooperatives. As there exists no universal term for the drivers in linkage literature, they will be referred to as backward and forward linkages or chain integrators are used for the rest of this report. This term has been chosen because the chain integrators attempt to facilitate the integration of smallholders into formalized production chains. Alternatively, terms such as chain facilitator driver for market linkages or market linkage developer could also have been chosen. All the different chain integrators have their own motivations and therefore different approaches to develop market linkages. As it is unsure whether one of these approaches is typically better than another, it is interesting to investigate the characteristics of the interventions by different chain integrators. This will lead to valuable insights of the functioning of several chain integrators and can possibly lead to more effective and balanced interventions by chain integrators in the future.

Although there is much development taking place in the field of technology at the same time scientist are developing innovation particularly the conservation of the fossil fuel and utilization of the renewable energy. Such development has also seen in the bio-fuel also now these bio – fuel seeds are converting to usable one. But much development has not been found as in the case of agriculture marketing. Still much development and research need for the maximum utilization of these resources. Looking into these back ground one can think about the following question to study the marketing activities, marketing cost, post harvesting and importantly the supply chain management. Hence this report is an attempt to answer these following questions. 1) What is the status of the Non edible oil seeds production in Karnataka? 2) Who are involved in the collection activities of the Non edible oil seeds in Karnataka? 3) How the markets are linked for Non edible oil seeds and processing? and 4) How the market structure for the Non edible oil seeds prevails in Karnataka.

To answer these questions following Objectives like trending in production, market arrival, existing market arrangements and institutional arrangements. This objectives were analyzed by using Descriptive research with Sample size of 40 collectors from Major bio fuel seeds producing belts of Karnataka; Chikmagalur, Tumkur, Kolar and Gadag districts. To interpret the data statistical techniques are used in the analysis like Trend Analysis, Cost-benefit analysis, and percentage analysis.

Results and discussions
As we are aware that backward and forward linkages in other agricultural produce is well established and most of the produces are having a good market in other countries. Even the bio fuel plants which is said to be a highly cultivated in Karnataka region the market for the same is quite complicated.

The studies reveals that the contract farming will enhancing marketing of bio fuel seeds market and the likelihood of improving the social and economic condition of the farmers particularly the small cultivators. It was seen that the market for the seeds that to 1.19% of are processed which is said to be low and most of the farmers are by the large farmers but according to the study there are more number of small farmers who are lack of proper post harvest facilities, lack of bargaining power, lack of motivation and unable to market their produce for fair cost.

This will help to bring out the strategy to help the small farmers to go for commercialization of the non edible oil plant and the bio fuel seeds cultivation through contract farming this will help in enhancing the living condition of the farmers and a better bargaining capacity. Moreover the contract farming will improve the good link for small and marginal farmers with private
sector and exploit the potential of agro-processing sector by supply the raw commodities to agro processing industries. Further the proposed project will recommend some of the policy measures to promote the long term sustainable partnerships and to overcome the danger of exclusion of modern supply chains.

However, in Karnataka common biofuel seed are Pongamia, Neem and Mahua. In Karnataka Gadag stood first in the production of non-edible oil seeds with 6644178 tons followed by Tumkur and Bijapur with the production of 6369091 tons and 5605797 tons respectively.

While on the arrival side of the biofuel seeds coming to regulated markets there is much fluctuating in some of the biofuel seeds. According to data it was found that Market arrival and price of Castor seeds to regulated markets are depicted for 6 years which clearly indicates that the flow of castor seeds to the market in Karnataka is having fluctuating and the supply has been declining year by year it was recorded about 13, 867 qtls where arrived to regulated market with the maximum price of Rs. 2,234 per quintals and minimum of Rs. 2,147 per quintals with the modal price of Rs. 2,201 per quintals in the year 2009-10. Though the price of the commodity has increase but the total arrival of castor seed has decreased to 3,120 quintals in the year 2014-15 with the annual growth rate of – 0.2579. Similarly the arrival pattern of other non- edible oil seeds are show similar trend of decline. The reason behind this decline is most of these collector feels that they can earn more money by taking up of daily wages at the nearby town and this has made serious issues now a day's even in the agriculture sector also seem to be same trend.

It was seen that there were only few marketing channel for the non-edible oil in the study area. The collection process will start during the seasonal time and the coolies and hamalies who work in the market will collect the seeds during morning and evening time. The collected seeds will be dried and the same are sold to the nearby traders. Traders who collect the seeds will be taken to nearby regulated market and the same are sold to commission agent, trader and some part to the oil mill. In the study area these oil mill owners will buy these seed and stored in their storages. Of course, post harvest technology is quite poor as this produce a seeds. Of 100% of the collected seeds 80% of the produce is purchased by the processor through the commission agents at regulated markets.

The processed product are not sold for further processing for fuel purpose but most of the oil mill owners will sell them to farmers as the fuel processing units are less in numbers and very few buyers. Of the total oil seeds only 20 percent oil can be extracted and the rest of them are sold as a by-product to farmers for bio-fertilizer and bio-pesticides. Usually, the farmers purchase the by-product in the form of cake called cake or hindi which is mixed with the other manure to get good yield. In the study area most of the oil extractor does the task of extracting the oil for the trader. They will not buy the seed for further processing. However, in some plant there will buy the seed and process it and sale the same to the traders. The seeds are also procure from nearby states like Tamil Nadu and Andhra Pradesh and sale the processed one to Kerala and Kodagu and even to coffee growing belt of Karnataka. In total the processor are not getting there share. That is the reason why these business is not that much popular. But the survey reveals that most of the plant owners are willing to do the business if the government comes forward in helping them and buy the bio – fuel oil from these people.