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Dr. Rajiv Kumar Gupta IAS is the Principal Secretary of Labour and Employment Department, Government of Gujarat. As the Managing Director of Gujarat Narmada Valley Fertilizer and Chemicals Limited (GNFC), he pioneered Neem Project, a socio-economic initiative to generate rural employment.

Creating an equitable world through the Neem Project

"When women and adolescent girls have equal rights and opportunities, their families communities, and nations prosper"

Dr. Babatunde Osotimehin

On 25 September 2015, the world took one step further towards equity by ratifying Sustainable Development Goals. Gender equality and reduced inequalities, goals 5 and 10 respectively, capture the essence of the parity the world needs. For India to achieve this, it needs to be rid of delinquencies woven into every industry. Government of India and the farmers for decades, have suffered the consequences of diversion of urea for nefarious practices. On 69th Independence Day, Shri Narendra Modi, Honourable Prime Minister of India, made history by making it mandatory to Neem coat 100% of urea. Gujarat Narmada Fertilizers and Chemicals Limited (GNFC) implemented the policy mandate by pioneering Neem Project, a socio-economic initiative to fulfil multiple policy objectives i.e., check the pilferage, improve land fertility, and increase crop yield. Once the Urea is Neem coated, it cannot be pilfered for non-agronomic uses.

Figure 1: Supply Chain of Neem Project The method followed by urea manufacturers of Neem-coating Urea is to buy Neem oil from the unorganized market and spray coat the Urea with it. Instead of taking this orthodox route of buying Neem oil to coat the Urea that it produces, GNFC pioneered Neem Project and started the backward integration process aimed at empowering marginalized communities, and the rural poor. More than a lakh women and landless labourers

Figure 1: Supply Chain of Neem Project

are involved in the

process of neem fruit collection which is sold, at a fair price, on the same day, through a well-organized supply chain (see Fig.1) constituting of Village Level Societies. These Neem fruits are processed to get Neem cake and extract neem oil which is further used for coating Urea.

UNDP Impact Assessment, conducted on November 2016, quantified the socio-economic footprint of the Neem Project. In addition to the 12-15 crore income generation for 1.25 lakh women in 22 districts, it noted that the women beneficiaries were empowered by increased decision making power and reduced incidence of domestic violence. Neem Project has also created indirect employment for over 50,000 rural people, positively influencing the community by reducing rural indebtedness, seasonal migration, and patriarchal control, while increasing expenditure control and asset creation by women, according to the UNDP. Ergo, the immediate impact of the Neem Project, in crisp terms, is reduction of inequalities - both gender and income.

Total Urea consumption in India is 310 lac metric tons, total neem oil required for urea coating is 26,000 metric tonnes and 3.65 lac metric tonnes neem seed is required. Neem Project has potential of replication throughout the



country for socio-economic empowerment of more than six million women across the country. Ministry of Fertilizer has paved way for this, on 11th November 2016, through its directive to other fertilizer companies to follow suit and adopt GNFC's model of Neem Project.

Creating Shared Value

As stated in Harvard Business Review, Shared value is a management strategy in which companies find business opportunities in social problems. The narrow focus on optimising short-term profits and speeding up financial growth, results in companies overlooking the greatest unmet needs in the market, which has broad influences and far reaching consequences on their long-term success. Michael E. Porter and Mark R. Kramer state that, it is fool-hardy of companies to ignore the social, environmental, and economic problems that surround them and fake immunity to them, while using philanthropy and/or CSR as its bulwark. It is a counter-productive as most of the business are modelled to fill a gap and/or mitigate the problems present, in the market. Then why is it that the economic agony of society, depletion of vital natural resources, and well-being of its customers are seen as non-business variables, is an important question to be asked in commercial industries of today.

GNFC felt that business and society could be brought to work in stronger collaboration with the other. The Neem Project fulfils the dual objective of being a socio-economic initiative designed to empower the rural poor, especially women, and fills the quality gap in the unorganised Neem oil market. Market survey of Neem Oil availability and quality thereof was conducted, by GNFC. It was found that traders were using spurious oil like rice bran oil, and palm oil etc., topping it with Azadirachtin, and selling it as a neem oil. Additionally, the policy mandate threw up a massive requirement of 26,000 MT of Neem Oil in the country.

This scarcity, to be converted into abundance, utilised locally available resources of Neem Seeds and manpower, therefore creating a Blue Economy. Neem Project went beyond substituting one product or process with another, and instead improved the supply chain, by beginning backward integration through neem seed collection. The innovation in the system, has opened up various possibilities and entrepreneurial opportunities, by making use of the wasted resource of neem seed, hence ensuring sustainability.

Apart from its role as an innovative gap filler in the market, Neem Project's main objective of socio-economic development is executed as Rural Income Generation Activity for the rural women of Gujarat. As a rural non-farm activity, the Neem Project set out to fulfil the needs of landless labourers, the largest rural section of Gujarat. According to International Research Journal of Agriculture and Rural Development, the most prevalent problems faced by agricultural labourers are;

- Low Wage Rate
- Low Social Status
- Lack of organisation
- Rural Indebtedness
- Seasonal Labour

The project addresses the above needs of the community, by filling a gap in seasonal employment. Neem seed collection work fills the gap by providing a source of income for landless women labourers during the dormancy period, when agricultural work is non-existent, and

many have to migrate to cities to earn.

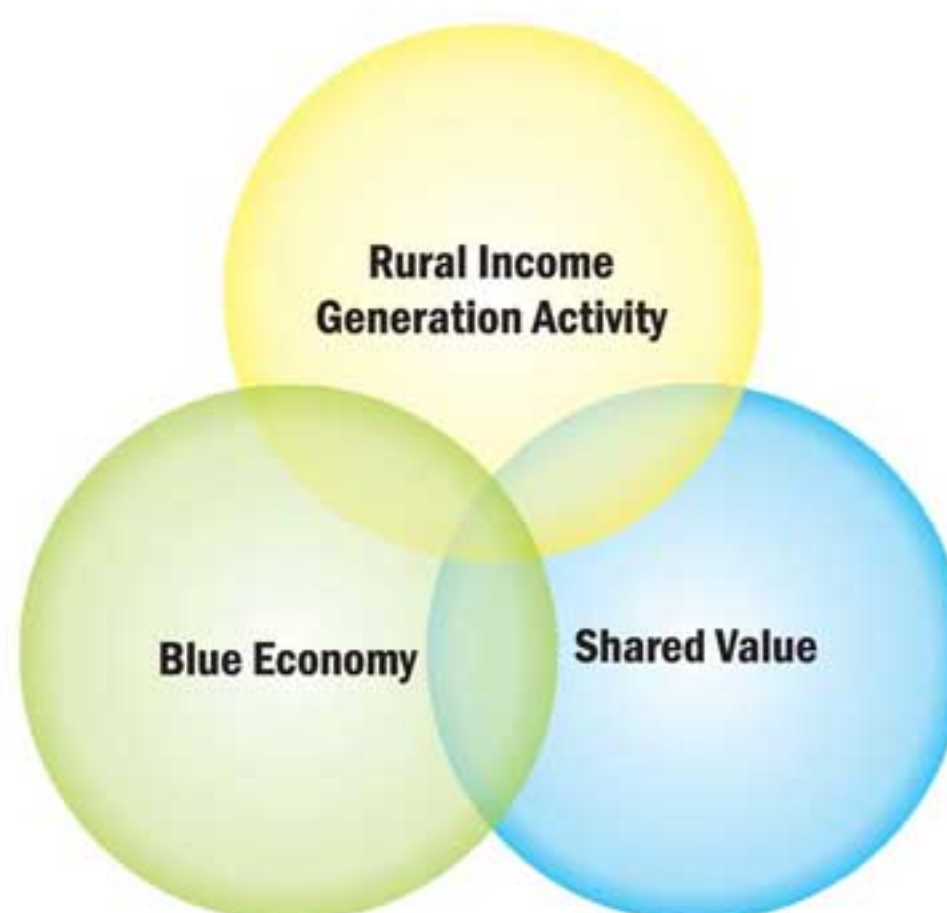


Figure 2: Neem Project - Divergence of Paradigms

Neem Project's uniqueness comes from, deriving its concept, design and mechanism from three varied but equally contributing concentrations, which aims to deliver equality of gender and income. It especially targets women's lack of access to decent work, occupational segregation and gender wage gaps in households. In addition, it aims to protect women against violence and discrimination, which could in the long-run further empower them socially and financially.

Measuring Equality

As recommended by the Organisation for Economic Co-operation and Development (OCED), a variety of indicators were taken into account for measuring change in gender equality, if any. Some of them are principal indicators and others significant, but all contributing to women empowerment and ultimately to gender equality.

Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM) dictate the main indicators such as life expectancy, education, representation and income. The gaps between them are filled by other international composite indices like Gender Gap Index, Gender Equity Index (GEI), etc.

The finalised measurement indicators are set in three major dimensions;

- **Economic Empowerment:** Measured by the economic opportunity and participation of women, with due importance given to class and caste, and by the income contributed to household in comparison with men.
- **Social Empowerment:** Decision making role in family, especially in matters of health and education. Female enrolment rates in primary, secondary and tertiary education, and literacy gender gap. Women as entrepreneurs and/or in political roles, were taken into consideration.
- **Psychological Empowerment:** Job satisfaction and mental health, maternal and child health, domestic violence, are significant indicators.

The UNDP Impact Assessment conducted on November 2016, has been undertaken in a systematic manner through the combined research methods with both quantitative and qualitative research techniques, methods, approaches, and concepts. It allowed the study to include the use of induction (or conclusion finding), deduction (testing of theories), and abduction (uncovering and relying on the best of a set of explanation for understanding the results).

As neem project is a relatively new project, this study needed to link the findings to understand the emerging patterns, if any, and then proceed to develop hypothesis to test them. Hence, to make a holistic logical circle of understanding about the socio-economic impact of the project, Combined Research methods were best suited.

With a total sample size of 2000+, it represented about 2% of total number of beneficiaries. Interviews and focus group discussions were also conducted, with other stakeholders and general public not associated with the project, as control group. It included 2002 interviews of project beneficiaries, 202 interviews with women not involved in the project (to understand the extent of intervention-impact), and Focused Group Discussions with 74 stakeholders across 129 villages in four districts including Gandhinagar, Bharuch, Patan and Banaskantha. With the Confidence level of 99 per cent and margin of error of +/- 3 per cent, the study findings are empirically sound and statistically coherent.

Equality Through Empowerment

Although gender equality is multi-dimensional and cannot be reduced to some single and universally agreed indicators, equality through empowerment has been echoed time and again through history. In accordance with the equality indicators mentioned above, the impact of the Neem Project's value creation could be observed in the following. The impact is disseminated especially for women involved vs. the women who were not, to differentiate the normal progress with the progress due to Neem Project. The impact is summarized and categorized in broad terms of Economic Empowerment, Social Empowerment and Psychological Empowerment. Following which, the improved equality will be discussed.

Financial Empowerment

1. Increased Income:

The average income of women in a year was Rs. 12,000/-. The average income from neem seed collection is Rs. 7,000/-, which pushes up the annual income to 19,000/-. There is an increase of 58.3 per cent in income per annum. This increase in income, enables the beneficiaries to progress higher up in the Maslow's pyramid of needs. As their basic needs and safety is assured, their sense of belonging grows and the path to self-esteem is paved.

2. Asset Creation:

A remarkable increase in livestock asset ownership, due to the income from neem seed collection. 336 beneficiaries purchased livestock such as buffalo, goat and hen from the additional earning. These livestock will either increase their net earnings or decrease their expenditure considerably. The parallel increase in socio economic status, due to the increased assets, is said to contribute to increased familial conjugality. In addition, these assets while increasing their net worth, - income and other aspects of socio economic status - is positively associated with the

educational achievement of their children.

Utilization of income

Majority of the women reported that the income earned from the neem seed collection was spent on food, health and education purposes. 70 per cent of their income is used for food, and the remaining 30 per cent is used for health, education and other amenities.

140 per cent increase in education related spending is a major milestone. It would aid in the empowerment of the future generations. As demonstrated in the case of Bhanuben from Dehgam Taluka, Gandhinagar district, who spends a large amount of her income for the education of her daughter-in-law and her children.

Reduction in Seasonal Migration:

Comparative study on expenditure before and after supplementary income from neem seed collection				
Parameters	Expenditure before neem seed collection	Expenditure after neem seed collection	Income contributed (%)	Increase after income from neem seed (%)
Food	9000	14000	71.40 %	55.55 %
Clothing	1000	1500	7.14 %	50 %
Education	500	1200	10 %	140 %
Health	500	900	5.72 %	80 %
Miscellaneous	1000	1400	5.74 %	40 %

Table 1:

Comparative study on expenditure before and after supplementary income from neem seed collection

The women beneficiaries shared that during the month of May to mid-July, they become workless, as no agricultural activities take place in the post-harvest season. As most of the family are mainly engaged in labour work, during this period they migrate to other places in search of work, to earn their bread and butter. The Neem Project has resulted in lowering seasonal migration by generating income, during lean period when landless labourers typically migrate for ad-hoc work.

Social Empowerment

1. Across Social categories

Around 35 per cent of neem seed collectors belong to SC-ST category, which is an increase in participation rate for income generating activities. Scheduled Tribes (STs) constitute 14.75 per cent of the total Gujarati population, whereas Scheduled Castes (SCs) constitute 8.04 per cent. With a total of 22.79 per cent, the participation rate is significantly higher by more than 10 per cent. Although this increased participation by itself is not phenomenal, but the effect it will have on the educational status, asset creation and autonomous power creation will be profound (as demonstrated in this paper).

2. Across educational level:

This RIGA endeavours itself to both literate and functional literate categories, in equal proportions. While it provides income generation activity to functional literate women, it provides entrepreneurial opportunities to literate women. Because literate women can manage and practice good techniques for collection of neem seeds, they are more likely to act as Village Level Collection Centre (VLCC). They are also more likely to participate and take initiative in the forward integration process, which includes soap and oil making.

3. Increased Decision making:

18.6 per cent beneficiaries were empowered to take decision in matters like marriage, education, health and property. Many took control of the household expenditure and the apparent change in pattern was observed. Women felt the increased control they exhibit was due to the income from neem seed collection, and they postulated that it gave them extra value in their family and society. This phenomenon is observed especially in the tribal areas of Umapada and Mandvi region, where the women did not handover their income to their husbands, rather the expenditure was handled by themselves.

4. Decreased Domestic Violence:

12.8 per cent women communicated their happiness regarding the reduction of domestic violence in their life after joining neem seed collection project. Many attributed it to reduced financial difficulties and increased control over the earnings.

This decline will aid the mental health of the women, through significant reduction in emotional distress, suicidal thoughts, and even suicidal attempts. According to Ellsberg et al., 2008, there is improvement in physical health too. Difficulty in walking, and other daily activities is reduced, along with pain, memory loss, dizziness, and vaginal discharge.

5. Empowered Upbringing:

In addition to increased educational spending by mothers and grandmothers, many adolescent girls involved in this project felt empowered by the income they received, which contributed to their education and/or their siblings' education. Mothers are also spending for the health of their children, as seen in the increased spending for health (see Table.1). One young mother, Bhartiben Thakorbbhai Jadav, resident of Vedaj village of Jambusar Taluka, Bharuch District, earned INR 10,150/- from neem seed collection, which she used to pay for childbirth at Borsad Hiral Hospital. It is expected that the Neem Project will have a significant impact on maternal and child mortality in 4-5 years.

• Psychological Empowerment:

On being asked about the happiness derived through this project, 99 per cent women were happy to be involved in neem seed collection. According to Drakopoulos and Grimani (2013), there is a strong positive relationship between income and happiness for low income households group, which many of the beneficiaries fall into. Happiness could also be due to the below mentioned familial closeness. Another important reason could be the reduction in migration. This migration has nearly stopped for those involved in this project due to good earnings. Those who do not or could not migrate to other places, tend to mortgage their belongings and borrow money from money lenders for high interest rate. But this year, rural indebtedness has decreased due to the income from neem seed collection. For many, it was a hard choice between spatial instability and a financial one. Neem Project was the much needed alternate choice for many.

The increase in earnings is said to have direct correlation with familial ties and educational achievement. Zhan (2006) offers two possible explanations for these positive effects. First, increased income enhances economic security by providing a safety net against unanticipated income shocks such as unemployment during off

seasons, illness, and death. Second, assets leads to positive attitudes and behaviours in both parents and children. It could be explained because parents with assets are likely to be future-oriented – not preoccupied with immediate short term needs - which in turn can lead to positive parenting behaviours. Children of such parents, due to the absence of worry and timely satisfaction of basic needs, tend to be more focused.

Hence, it is no surprise that 91 per cent beneficiaries wanted to continue this work in the upcoming seasons, as it gives them a productive livelihood. The flexibility in this work, they said, is unmatched by other RIGAs. In spite of flexibility in timings, many were able to earn their yearly earning in a short period of time.

All the broad parameters of empowerment – financial, social and psychological - demonstrates not only areas of impact, such as enhancing their access to and control over economic resources and enabling them to establish their rights, but also showcases the circle of empowerment where decision making reduces domestic violence and enhances income, which boosts decision making ability and so on. It could be hypothesized, that all the positive effects are closely interlinked. Less instability and absence of debt leads to decreased violence and asset creation, which results in better health and supportive family, while increasing the women's role in decision making and household expenditure, hence culminating in financial and social empowerment of women.

Empowerment leads to equality, as seen in Maslow's hierarchy of needs. When the basic physiology and safety needs are met, there is gradual progress towards self-esteem and self-worth. Equality as measured by the above set indicators of financial, social and psychological empowerment, is achieved through the Neem Project.

Conclusion:

There is a large rural non-farm economy around the world, according to the FAO (1998), among others. This seemingly simple process of neem-coating of urea has created employment and earned opportunities on such a grand scale that the statistics speak for themselves. Extensive impact of the project has led to its exponential growth. In 2015-16, its first year of operations, the Neem Project generated INR 10-12 Crore supplementary income for about one lakh rural women and landless labourers.

Neem Project expanded exponentially in 2016-17 by generating around INR 12-15 Crore in supplementary income with an additional 25,000 women joining in the project as Seed Collectors. In addition, indirect employment has been generated for another 50,000 rural people. The project highlights include 2200 VLCCs established, 8000 MT of Neem cake manufactured, 11 storage facilities established, 860 MT of Neem Oil produced, and a range of forward integration products launched by 2016 end. GNFC has further optimised the supply chain by successfully petitioning the government to direct fertiliser companies to buy neem oil only from genuine producers and not from traders.

Neem Project should be scaled up and replicated in other companies throughout India, as a transformative model of Shared Value Creation. To fulfil the policy mandate, more than 26,000 metric tonnes of neem oil is required to coat 310 lakh metric tonnes. Nearly 3.65 lakh metric tonnes of neem seed has to be collected, which would involve and empower over six million women across the country.

Directive of Ministry of Fertilizer, on 11th November 2016, to other fertilizer companies to adopt GNFC's model of Neem Project has been the right step in the direction and GNFC is handholding them to accomplish this.

The Neem Project has made significant contributions towards women empowerment, which comes from having access to education, being active in the community, achieving financial independence and

participating fully in democratic life. For many, it has meant a life free from the threat of violence. Women and girls who are empowered are better equipped to reach their full potential and when they have the opportunities and resources to do so, the society as a whole is strengthened. Only then, we can achieve our SDGs, and talk about gender and income inequality in historical terms. ■

Institute Of Directors EVENTS CALENDER 2017-2018

Global Convention on **CORPORATE ETHICS & RISK MANAGEMENT**

Also presentation of Golden Peacock Awards
for Risk Management & Corporate Ethics
17th - 18th February 2017
Mumbai (India)

1

Dubai Global Convention - 2017 27th World Congress on Leadership for **BUSINESS EXCELLENCE AND INNOVATION**

Also presentation of Golden Peacock Awards for
Quality, Training Business Excellence &
Innovative Product/Service
18th - 20th April 2017
Dubai (UAE)

2

19th World Congress on **ENVIRONMENT MANAGEMENT**

Also presentation of Golden Peacock Awards for
Environment Management Occupational Health
& Safety and Eco-Innovation
7th - 8th July 2017
Hyderabad (India)

3

DIRECTORS' CONCLAVE

4th August 2017
New Delhi (India)

4

17th London Global Convention on **CORPORATE GOVERNANCE AND SUSTAINABILITY & GLOBAL BUSINESS MEET**

Also presentation of Golden Peacock Awards for Corporate
Governance, Sustainability (both National & Global)
11 - 13 October 2017, London (UK)

5

2nd Global Convention on **CORPORATE ETHICS & RISK MANAGEMENT**

Also presentation of Golden Peacock Awards for
Risk Management & Corporate Ethics
14 - 15 December 2017, Singapore

6

12th International Conference on **CORPORATE SOCIAL RESPONSIBILITY**

Also presentation of Golden Peacock Awards for
Corporate Social Responsibility (both National & Global)
& HR Excellence
16 - 17 February 2018, Bengaluru

7

National Convention on **CORPORATE GOVERNANCE & SUSTAINABILITY**

Also presentation of Golden Peacock Awards
for Innovation Management
16th March 2018, Mumbai

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*Subject to change