

## PROJECT PROPOSAL FORMAT

### PART-A

#### Organization Profile:

Name of the organization and contact Details	Indo Global Social Service Society 28, Institutional Area, Lodhi Road, New Delhi – 110003
Year of establishment and registration Details	Year of establishment - 1961  Registered as a Society under Society Registration ACT XXI of 1860  Registration Number- S-1787
Brief About the Organisation	IGSSS implements and supports quality development programs across 17 States and one Union Territory of India.  IGSSS reaches out to more than one lakh families every year through its programs on sustainable livelihood, disaster risk reduction, climate change adaptation, gender equity, urban poverty reduction and youth development. In the FY 2017-18, we reached out to 1, 12,761 families. We ensure that above 90 % of the communities that we work with include Scheduled Caste, Scheduled Tribes and other backward communities. Overall, the programmes at IGSSS are targeted towards the poor, marginalized and vulnerable sections of the society with special emphasis on women and children.
Years of experience in similar projects	We have five decades of experience in similar projects
Average turnover in past three years	INR 21,89,75,438
Registered non-profit with 12 A and 80 G (Yes/No)	Yes

## **PART-B**

### **Project proposal outline:**

1. **Name of the project:** Creating Sustainable Solid Waste Management Solutions for Cleaner, Safer and Beautiful Delhi
2. **Thematic area:** Environment (Solid Waste Management)
3. **Target Groups and their Geographical areas:** Targeted Households & Waste Collectors

Solid waste management (SWM) is one of the major environmental problems of Indian cities. Improper management of municipal solid waste (MSW) causes hazards to inhabitants. Various studies reveal that about 90% of MSW is disposed of unscientifically in open dumps and landfills, creating problems to public health and the environment. Municipal corporations have struggled to handle these issues of waste in the terms of segregation, collection, transportation and disposal.

Uncontrolled dumping of wastes on outskirts of towns and cities has created overflowing landfills, which are not only impossible to reclaim because of the haphazard manner of dumping, but also have serious environmental implications in terms of ground water pollution and contribution to global warming. Burning of waste leads to air pollution in terms of increased TSP and PM10 emissions, which is equivalent to vehicular emissions at times.

In the absence of waste segregation practices, recycling has remained to be an informal sector working on outdated technology, but nevertheless thriving owing to waste material availability and market demand of cheaper recycled products. Paper and plastic recycling have been especially growing due to continuously increasing consumption levels of both the commodities.

**Chittaranjan Park (CR Park)** is a planned colony developed around the 1960s after land was allotted to refugees from East Bengal. It is well connected and is adjacent to the District Centre of Nehru Place. It is located in the posh area of South Delhi and is surrounded by a mixed urban fabric such as planned areas (Kalkaji, GK, Nehru Place), unplanned areas (Govindpuri) and green areas (Jahanpanah Forest).

**Total Population:** 31866 (as per 2011 population census)

**Informal sector workers (waste collectors):** 350 (Each rag picker collects an average of 10 kg of waste and earns approximately Rs 80 to 100 per day.)

### **4. Strategies for implementation**

IGSSS is actively working on the issue of Solid Waste Management (SWM) with partners in many cities like Indore, Vishakapatnam etc. Our engagement until now has been focused on enabling Waste Pickers to come together in the form of SHGs and avail various entitlements through the existing government policies and at the same time assisting the local municipal corporations in formulating mechanisms to manage their waste effectively. We are successfully partnering with Indore Municipal Corporation on raising awareness about SWM under Swacch Bharat Mission. In Vishakapatnam, we aided the Greater Vishakapatnam Municipal Corporation in their Swacch Bharat surveykshan, and aiding in the registration of more than 3000 waste pickers. We are also

collaborating with numerous local and national campaigns for a sustainable and efficient Solid Waste Management planning in Indian Cities.

In the absence of waste segregation practices, recycling has remained to be an informal sector working on outdated technology, but nevertheless thriving owing to waste material availability and market demand of cheaper recycled products. Paper and plastic recycling have been especially growing due to continuously increasing consumption levels of both the commodities. **India produces 42.0 million tons of municipal solid waste annually at present. Per capita generation of waste varies from 200 gm to 600 gm per capita / day and it is growing at an alarming rate. The waste generation rate for Delhi is about 700 gm/person/day, which is almost five times the national average.** Recently government has launched 'Swachh Bharat Abhiyan'. One of our main priorities is to initiate a series of community level action to create equilibrium between 'cleanliness within communities', 'better services to residents' and 'environment protection' in coming years. Furthermore, our effort to assist waste collectors to be recognized as 'green labour' is geared towards creating a sustainable model of waste to manure within community sphere.

The solid waste management rules 2016 mandated that the waste processing facilities will have to be set up by all local bodies having 1 million or more population. The rules also fix responsibility of generators to segregate waste into three categories – **Wet, Dry and Hazardous** and the generator will have to pay 'User Fee' to the waste collector.

In this project we propose to create '**Zero Waste locality**' through '**Waste to Manure**' strategy. The suggested model of waste management is based on the premise that waste needs to be managed at the community level itself with active participation of waste generators. Also owing to landfill shortages and the need for increased resource efficiency, there is a need to move away from the waste treatment approach and move towards waste prevention, commonly summarized as 4Rs: **Reduction, Reuse, Recycling and Recovery.**

The following waste management hierarchy is suggested:

1. Wherever possible, waste reduction is the preferable option.
2. If waste is produced, every effort should be made to reuse it if practicable.
3. Recycling is the third option in the waste management hierarchy. Although recycling does help to conserve resources and reduce wastes, it is important to remember that there are economic and environmental costs associated with waste collection and recycling. For this reason, recycling should only be considered for waste which cannot be reduced or reused.
4. Finally, it may be possible to recover materials or energy from waste which cannot be reduced, reused or recycled.

**Community-based composting is an ideal form of recycling**, as it reduces truck hauling for managing garbage and involves local community to take responsibility of its waste. Finished compost is more readily available for growing food by households, urban and rural farms, community gardens, and school gardens. It is also available for low-impact development and green infrastructure such as green roofs, green streets. In short, community composting builds more resilient and sustainable communities.

**These are some of the issues that the project will address :**

- **No System of Primary Collection from the Doorstep**

There is no public system of primary collection from the source of waste generation. The waste discharged here and there is later collected by municipal sanitation workers through street sweeping, drain cleaning, etc. Street sweeping has, thus become the principal method of primary collection.

- **Irregular Street Sweeping**

Even street sweeping is not carried out on a day-to-day basis in most cities and towns in India. Generally commercial roads and important streets are prioritized and rest of the streets are swept occasionally or not swept at all. The tools used for street sweeping are generally inefficient and outdated.

- **Waste Storage Depots**

As waste is collected through traditional handcarts/tricycles that can carry only a small quantity of waste at a time, there is a practice to set up depots for temporary storage of waste to facilitate transportation through motorized vehicles.

- **Transportation of Waste**

Transportation of waste from the waste storage depots to the disposal site is done through a variety of vehicles, a few cities use modern hydraulic vehicles but most of the transport vehicles are old and open. They are usually loaded manually. The fleet is generally inadequate and utilization inoptimal. Inefficient workshop facilities do not do much to support this old and rumbling squad of squalid vehicles. The traditional transportation system does not synchronize with the system of primary collection and secondary waste storage facilities and multiple manual handling of waste results.

- **Processing of Waste**

Only a few cities have been practising decentralized or centralized composting on a limited scale using aerobic or anaerobic systems of composting. In some towns un-segregated waste is put into the pits and allowed to decay for more than six months and the semi-decomposed material is sold out as compost. In some large cities aerobic compost plants of 100 MT to 700 MT capacities are set up but they are functioning much below installed capacity. A few towns are practicing vermi-composting on a limited scale.

- **Disposal of Waste**

Disposal of waste is the most neglected area of SWM services and the current practices are grossly unscientific. These sites emanate foul smell and become breeding grounds for flies, rodent, and pests. Liquid seeping through the rotting organic waste called leachate pollutes underground water and poses a serious threat to health and environment. Landfill sites also release landfill gas with 50 to 60 per cent methane by volume. Methane is 21 times more potent than carbon dioxide aggravating problems related to global warming.

**5. Expected impact on target group**

• **Increased awareness about SWM:**

- Exposes community members to the concept of reduce, reuse and recycle of waste.
- Educates children and the public about SWM especially composting, how it is done, and how it can be incorporated into everyday life.

• **Local Economy, Jobs Training & Employment Benefits:**

- Stimulates and diversifies local economies by supporting local small-scale enterprises.
- Encourages local training, volunteering, and employment opportunities.

• **Volunteering Opportunities:**

- They will get an insight into the complexities of underprivileged existence and health and solid waste management as complex social issues.

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**Step-1: Door to door collection of waste –**

- a- Collection of waste from houses, schools, shops and other community areas by waste collectors. Door to door collection will be conducted by existing waste workers in the area.
- b- Each waste worker's cart/tricycle will be converted into a **dual bin cart**. A wet waste drum will be placed in each cart to create separate bin for biodegradable waste.
- c- Waste workers will be provided occupational safety gear like gloves, boots, aprons and will be trained on segregation of biodegradable and non-biodegradable waste
- d- Household level training/Awareness campaigns will be organized on waste management using various IEC techniques. Proposed tools are door to door campaign, distribution of pamphlets, street theatre performances etcetera. Regular workshops would be conducted for residents and waste collectors to discuss efforts required to convert their area in to 'zero waste locality' in an environmentally friendly manner.
- e- RWA will be sensitized about the issue and would be involved in creating micro plan of waste management (includes houses/streets/schools/shops/other establishments) in each locality

**Step-2: Segregation-**

- a- After collection the primary level segregation will be done by waste collectors at the dhalao level built in each the housing area. The system is based on the DDA norm for one dhalao per 1000 population in the Housing Area (population 5,000) and 0.60 kg waste/capita
- b- Recyclable waste and biodegradable waste will be segregated and will be transported to the 'material recovery House'.
- c- Inert/hazardous material will be transported to the landfill by municipal transporting vehicles.
- d- From the 'dhalao', the waste will generate 50% of organic waste and 30% recyclables, and will be processed through composting after segregation on project site and the Integrated Recovery Centers (IRCs) & compost-pits.

**Step-3 Secondary segregation at Material recovery facility**

- a- It is a dedicated area for secondary segregation and pre-processing of waste.
- b- Waste material is segregated and is temporarily stored before transporting to: Composting facility (to be developed next to MRF); Buyers of recyclable material and also provides a space for waste workers to rest, change clothes, shelter from the weather
- c- 90 pit ((2 cubic meter L+W+H) )compositing facility will be constructed at 2 locations. (1 cubic meter will be constructed

**Step 4: Decentralized composting-**

- a- Community composting involves a relatively small-scale system in which biodegradable waste material is converted into compost within a local community. 50% compost will be sold in the market to support maintenance of MRF, composting chemicals, manpower support. Rest 50% compost will be provided to the parks in the residential colonies. Most of compost will be sold off to residents and outside including Municipal Corporation/ Horticulture Department Fertilizer ministry and neighboring Farmers.
- b- Plantation drives will be organized to enhance green spaces in the localities in collaboration with RWAs

## 6. Indicators for measuring impact

Through this project we propose to create 'Zero Waste locality' through 'Waste to Manure' strategy. To achieve this, we desire to promote 'Source Segregation Practice of Wet and Dry Waste in Communities' and create 'Materials Recovery Facilities (MRF)', which can give community a sustainable future. Waste collectors will collect household waste from identified points and bring those to 'MRF' to convert into 'Bio culture' and 'Aerobic Compost'.

Parties would pick up this waste in bulk for transportation to Landfills. Such an integrated scheme would significantly reduce the transportation costs as well as landfill area requirements.

## 7. Expected budget

INR 48.00 Lacs for a year

## 8. M&E system outline

### Project Matrix and Detailed Implementation Plan (DIP)

As per the results, activities, budget set for the project, a project matrix will be developed by the project team in the first month of the project in consultation with Regional Manager. The Project Matrix will contain details of each and every activity of the Project along with their Outcome and target beneficiaries. The Detail Implementation Plan will contain Month-wise break-up of the Project activities along with the budget, so that the Project Team keep a track on the Project on monthly basis.

### MIS Reporting

Online/Digitized MIS reporting on the Project Targets and Indicators, through mobile based MIS Application

### Monthly Project Update

This reporting type has been quite useful in the previous Projects. The update is especially developed to keep a track on the utilization status of the fund and micro level update on each and every activity, how they are being delivered, follow up actions, etc. This will also help the Project Team to get update on any fund balances on monthly basis and as each of the program activities are analyzed carefully, if there are fund balance available, those can be utilized on other Program Head as per requirements.

### Progress Reports

- Monthly Progress report and Finance report submitted on 2<sup>nd</sup> of every succeeding month.
- Half Yearly and Annual Narrative Report and Finance Report will be submitted

## 9. ROI/Unit Cost Investment/Return on Investment

Cost per beneficiary is expected to be around INR 85.33

## 10. Project Sustainability

A decentralized model of waste management is proposed: the initiative would help to test its sustainability - not just economically, but also environmentally and socially. It is a replicable model and same has been tried out in various localities in Delhi/NCR.

This is an accomplished alternative model of collection, segregation, recycling, transportation, sale, and eventual disposal of municipal solid waste. This system complies with Delhi Development Authority (DDA) norms and Solid waste management Guidelines 2016.

The proposed model ensures 'zero waste localities' by making local community responsible for managing its waste by adopting waste to manure strategy. The ownership lies with the RWA, community people, waster pickers along with municipal bodies to plan and implement decentralized waste management system.

Waste pickers verified by RWA will collect, segregate, transport and dispose the waste. The compost prepared will help in greening the open spaces in the locality thereby creating huge environmental effect. The compost sold in the market will help in maintaining compost pits, MRF and other operational costs.

The initiative would feed positive changes, in making the proposed decentralized model more inclusive and sustainable - not just economically, but also environmentally and socially in a course of utilizing maximum proportion of waste in to useful object. This may also help neighbouring Residence Welfare Association (RWAs) to evolve appropriate policy framework to replicate sustainable waste management system in their colonies.