

INDIA DEVELOPMENT MARETPLACE
(WORLD BANK)
(LOGO)
2007

PROPOSAL FORM

(PROPOSAL Id:1693)

Organization Information

- 1. Name of organization:** WOMEN'S ACTION FOR DEVELOPMENT (WAFD)
- 2. Person responsible for project:** ZAREEN MYLES
- 3. Title of contact person:** EXECUTIVE DIRECTOR
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- 7. Street address:** THIRD FLOOR, ST. SOLDIER TOWER
- 8. City/ Town/ Village:** VIKAS PURI, NEW DELHI-18
- 9. Type of organization (tick in box below):** NON-GOVERNMENTAL ORGANIZATION

10. Describe your organization and include Date Established/ if individual, specify your special field of work. Please provide additional information as applicable to your project area: a) submit a letter recommending the work done by your organization from the District Magistrate or local government authority or the Head of your University according to the region you are working in. Send this letter by post at the earliest. In not more than 50 words.

WAS REGISTERED UNDER INDAN SOCIETIES ACT IN SEPTEMBER 1978. WAFD PROGRAMS FOCUS IS ON WOMEN AND CHILDCHILDREN.

SINCE 2002 WAFD PARTNERING WITH INSEDA IS PROMOTING "ECO VILLAGE DEVELOPMENT" IN 12 VILLAGES, FOCUSING ON CAPACITY BUILDING OF COMMUNITIES TO MANAGE PROGRAMS THEMSELVES.

SEPARATE RECOMMENDATION LETTER FROM LOCAL GOVERNMENT AUTHORITY IS SENT.

11. Title of your project idea (in not more than 10 words):

PROMOTION OF ECO-FRIENDLY BAMBOO BASED LOW COST HOUSEHOLD BIOGAS PLANT

12. Implementation Region: Please specify the name of the village/s, district and state you wish to pilot your project. Clearly mention the number of beneficiaries that will benefit from this initiative. Not more than 30 words.

12 VILLAGES IN TWO BLOCKS OF BHARATPUR DISTRICTS OF RAJASTHAN STATE. NUMBER OF DIRECT BENEFICIARIES WILL BE- 30 BIOGAS PLANT OWNERS, 20 WOMEN WEAVERS OF BAMBOO STRUCTURE, 12 RURAL MASONS.

13. Theme:

GENERATION AND USE OF RENEWABLE ENERGY, INCLUDING SOLAR POWER, WIND POWER, BIOMASS BASED FUELS AND CONVERTING WASTE TO ENERGY

14. Is your organization partnering with another organization?

YES (FOR TECHNICAL AND CAPACITY BUILDING PARTNERSHIP WITH INSEDA)

15. If you answered yes to the question above, list the name and contact details of the partner/ partners' organization and the funds they are contributing? If your proposal is chosen for the grant award you will need to submit a letter by the partner on their letterhead confirming the contribution amount and timeline of this contribution (it has to be within the two year period). Not more than 50 words.

INTEGRATED SUSTAINABLE ENERGY & ECOLOGICAL DEVELOPMENT ASSOCIATION (INSEDA),
27-B ZAMROODPUR, BEHIND KAILASH APARTMENTS, NEW DELHI-110048

INSEDA SECTY GEN IS DESIGNER OF BAMBOO REINFORCED GRAMEEN BANDHU BIOGAS PLANT. INSEDA WOULD CONTRIBUTE AS TECHNICAL PARTNER, PROVIDING TRAINERS TRAINING, GUIDANCE/ SUPPORT IN IMPLEMENTATION, FOLLOW-UP AND MONITORING OF SOCIO-TECHNICAL OUTPUTS, BUT WILL NOT PROVIDE FUNDS.

16. Objective: What is/are the specific problem (s) that you are trying to address? How does it better protect and manage the natural resources (please give numbers of people currently affected by the problem in the project area)? Not more than 200 words.

THE 12 TARGET VILLAGES HAVE 700 FAMILIES WITH 3,500 POPULATIONS. THE PROBLEMS AFFECTING THEM ARE:

1. RESPIRATORY HEALTH AND EYE PROBLEMS OF WOMEN, CHILDREN AND ADOLESCENT GIRLS DUE TO INDOOR POLLUTION CAUSED BY OPEN FIRES USING DRIED COWDUNG CAKES AND AGRICULTURE WASTE AS COOKING FUEL.
2. DEPLETED AND UNFERTILE SOIL DUE TO EXCESSIVE USE OF CHEMICAL FERTILIZERS AND PESITICIDES, AND AFFECTING PEOPLE'S HEALTH ADVERSELY BY EATING CHEMICALLY CONTAMINATED GRAINS AND VEGETABLES.
3. TRADITIONAL BIOGAS PLANTS CONSTRUCTION IS SOLELY MEN'S PRESERVE WITH NO ACTIVE PARTICIPATION OF WOMEN.

THE INTERVENTION WILL REDUCE THE INDOOR POLLUTION AS BIOGAS PRODUCED BY THE PLANT WILL BE USED AS CLEAN COOKING FUEL, WHICH WILL SAVE THE WOMEN TIME AS THEY WILL NOT

HAVE TO COLLECT PLANT BASED BIOMASS OR MAKE COWDUNG CAKES FOR COOKING OR LABOUROUSLY CLEAN THE SOOT BLAKENED UTENSILS.

BIOGAS DIGESTED SLURRY WILL BE AVAILABLE THAT WILL PROVIDE NUTRITIONALLY ENRICHED ORGANIC MANURE FOR THEIR CROPS. THIS WILL HELP IN GRADUALLY IMPROVING AND REGAINING THE FERTILITY AND QUALITY OF TOP SOIL. CROP PRODUCED WILL BE ORGANIC AND HEALTHIER, WHILE FETCHING THEM BETTER PRICES.

WOMEN'S PARTICIPATION WILL BE ENSURED BY WEAVING BAMBOO BASKETS FOR THE GRAMEEN BANDHU BIOGAS PLANT AND EARNING INCOME IN THEIR OWN VILLAGES.

17. Idea: How does your idea help in addressing the problem (s) described above? Not more than 200 words.

GRAMEEN BANDHU BIOGAS MODEL USES ENVIRONMAENTLY-FRIENDLY BAMBOO BASKETS FOR REINFORCEMENT AND DESIRED SHAPE, WHILE REPLACING ECOLOGICALLY UNSUSTAIBLE BRICKS THAT CAUSES ATMOSPHERIC POLLUTION. SMOKEFREE KITCHEN WILL ENSURE LESS EYE PROBLEMS FOR MOTHERS, ADOLACENT GIRLS AND CHILDREN, AS WELL AS REDUCTION IN RESPIRATORY PROBLEMS/DESEASE. SAFETY TO WOMEN WORKING IN THE KITCHEN WILL BE PROVIDED, AND DRUDGERY WILL BE GREATLY REDUCED.

SINCE THE BAMBOO BASKETS CAN BE WOVEN AT THEIR HOMES AND STORED, THE WOMEN CAN WORK DURING THE TIME WHEN THERE IS NO LABOUR WORK AVAILABLE FOR THEM, THUS HELPING THEM EARN SOME MONEY WHEN NEEDED.

THE MODEL PROPOSED BEING ALSO CHEAPER, MORE HOUSEHOLDS WITH EVEN 2-3 BUFFALOWS WILL BE ABLE TO AFFORD IT.

USING BIOGAS DIGESTED SLURRY AS ENRICHED ORGANIC MANURE WILL NOT ONLY IMPROVE THE FERTILITY OF SOIL BUT ALSO IMPROVE WATER RETENTION CAPACITY OF THE SOIL IN THE LONG RUN. USING THE SLURRY ALSO MEANS LESS NEED FOR IRRIGATION AS COMPARED TO CHEMICAL FERTILIZERS.

GRAMEEN BANDHU BIOGAS PLANT WOULD HELP IN IMPROVING VILLAGE SANITATION AS WHEN FARMERS MAKE COWDUNG MANURE TRADITIONALLY THEY JUST KEEP ON DUMPING IN A HEAP, WHICH LOSES MOST OF THE NUTRIENTS, ALSO LEADING TO UNHYGEINC CONDITIONS; MOREOVER RELEASEING METHANE A GREEN HOUSE GAS IN ATMOSPHERE.

18. Implementation: How will you implement your idea? Describe in details the activities/ process your project will undertake to realize its objective(s). List step-by-step how you will implement the programme in Phase I (first tranche of the award money) and Phase II (the final installment of the award money). Not more than 200 words.

THE IDEA WILL BE IMPLEMENTED WITH THE HELP OF VILLAGE VOLUNTEERS, WOMEN AND YOUTH IN 12 TARGET VILLAGES THROUGH CAPACITY BUILDING TRAININGS.

FIRST YEAR ACTIVITIES:

- (A) TRAINING OF 10 RURAL WOMEN IN WEAVING OF BAMBOO STRUCTURES (USING UNDERGROUND MOULDS) ON 1 OR 2 AND 3 OR 4 CUM GRAMEEN BANDHU PLANT (GBP)
- (B) TRAINING OF 6 RURAL MASONS IN STEP-BY-STEP CONSTRUCTION OF FOUR SIZES GBP

- (C) PRACTICAL EXPOSURE OF 24 VOLUNTEERS AND 24 RURAL YOUTH CLUB (RYC) MEMBERS DURING THE IMPORTANT CONSTRUCTION STAGES OF 4 DIFFERENT SIZES PLANTS
- (D) ONE-DAY MOTIVATIONAL CAMPS FOR PLANT OWNERS/ PROSPECTIVE PLANT OWNERS
- (E) TRAINING ON PHOTO-DOCUMENTATION FOR 24 VOLUNTEERS (MOTIVATORS-CUM-TRAINERS) DEPICTING IMPORTANT CONSTRUCTION STAGES OF GRAMEEN BANDHU PLANTS
- (F) TRAINING TO FIELD STAFF ON BASIC PRINCIPLES OF BIOGAS TECHNOLOGY, DIFFERENT DESIGNS OF PLANTS AND ADVANTAGE/DISADVANTAGE AND OTHER RETS.
- (H) TRAINING TO MAHILA MANDALS ON MICRO FINANCING FOR BIOGAS PLANTS.
- (I) TRAINING ON USING BIOGAS DIGESTED SLURRY FOR COMPOSTING & PROPER USE.
- (J) CONSTRUCTION OF 15 GRAMEEN BANDHU PLANTS.

SECOND YEAR ACTIVITIES:

MOST TRAINING PROGRAMS DONE IN THE FIRST YEAR WILL BE REPEATED IN THE SECOND YEAR FOR NEW TRAINEES (10 WOMEN, 6 MASONS, 24 MOTIVATORS-CUM-TRAINERS VOLUNTEERS AND 24 RYC MEMBERS) AND CONSTRUCTING 15 GBP.

19. Innovation: How is your idea truly innovative or unique? Describe the extent to which it uses a novel approach and is different from others in this sector. Not more than 200 words.

PROPOSED IDEA IS UNIQUE AS IT USES THE EASILY AVAILABLE BAMBOO (**NO CHEMICAL IS USED IN BUILDING GBP**) AND ENSURES ACTIVE PARTICIPATION OF WOMEN IN THE CONSTRUCTION OF THIS MODEL, WHILE THERE HAS BEEN NO PARTICIPATION FOR THEM IN THE BUILDING OF EARLIER BIOGAS MODELS.

GRAMEEN BANDHU PLANT (GBP) IS COST EFFECTIVE AND RURAL BASED ENVIRONMENTALLY FRIENDLY TECHNOLOGY. MOREOVER, THE GBP IS EQUALLY STRONG AND STURDY AND SAME USEFUL WORKING LIFE AS PREVIOUS/EXISTING INDIAN HOUSEHOLD BIOGAS MODELS.

THIS TECHNOLOGY (GBP) PROMOTES COMPARATIVELY MORE LOCAL SELF-EMPLOYMENT, USING ENVIRONMENTALLY BENIGN AND ECO-FRIENDLY BUILDING MATERIALS (BAMBOO WOVEN STRUCTURES), USED AS THE MAIN BASE FOR FABRICATING/CONSTRUCTING THIS BIOGAS MODEL.

MAJOR INNOVATION IS THAT THE LOCAL WOMEN BECOME BOTH WAGE EARNERS IN THEIR SPARE TIME AND ALSO THE BENEFICIARY OF THE EFFICIENT, DRUDGERY-FREE, CLEAN & CONVENIENT COOKING FUEL USING GBP. WOMEN CAN WEAVE THE BAMBOO BASKETS/STRUCTURES IN THEIR OWN VILLAGES AND IN THEIR FREE TIME.

THESE BASKETS/STRUCTURES CAN BE STORED TILL REQUIRED FOR CONSTRUCTION IN DISTANCE VILLAGES. FOR ENSURING CORRECT SIZE AND SHAPE OF THE WOVEN STRUCTURES, UNDER GROUND MOULDS ARE MADE AS PER THE CORRECT DIMENSIONS BY THE TRAINED MASTER SUPERVISORS/MASTER MASONS, SO ONCE TRAINED PROPERLY THESE WOMEN CAN NOT MAKE MISTAKES IN WEAVING.

20. Outcomes / Results: What are the expected outcomes/results of your project? Whom will it benefit? How will you measure/ ascertain the impact of these outcomes/results? Not more than 200 words.

DIRECT BENEFICIARIES WILL BE FROM THE 12 TARGET VILLAGES. LONG TERM IMPACT WILL BE ASCERTAINED THROUGH PRE AND POST IMPLEMENTATION DATA AND RECORDS.

- A). SPECIFIC RESULTS/OUTPUT:
- 30 GRAMEEN BANDHU PLANTS (GBP) BUILT IN 12 TARGET VILLAGES
 - 2 CONSTRUCTION TRAININGS CONDUCTED FOR:
 - 10 WOMEN ON WEAVING OF BAMBOO STRUCTURES
 - 5 LOCAL MASONS TRAINED ON STEP-BY-STEP BUILDING OF GBP
 - AWARENESS CAMPS AND REFRESHERS TRAINING PROGRAMS IN CRITICAL AWARENESS ABOUT MICRO-ENVIRONMENTAL AND AGRO-ECOLOGICAL RELATED ISSUES, TO AT LEAST FOLLOWING NUMBER:
 - 200 WOMEN
 - 100 YOUTH
 - 48 MOTIVATORS-CUM-TRAINER VOLUNTEERS (24 MALE AND 24 FEMALE)
 - 50 FARMERS TAKEUP ORGANIC FARMING USING DIGESTED SLURRY FROM 30 NEW AND 22 EXISTING GBPS.
 - 10 GBP OWNERS (EXISTING/ NEW) MOTIVATED TO BUILD PROPER DIGESTED PITS USING OWN RESOURCES.
- B). GENERAL RESULTS/OUTPUT
- AWARENESS ABOUT ENVIRONMENT, ECOLOGY, ORGANIC FARMING, INDOOR POLLUTION AND SANITATION IN 10 ADDITIONAL VILLAGES OTHER THAN 12 TARGET VILLAGES
 - AWARENESS ABOUT OTHER RENEWABLE ENERGY ISSUES
- C). LONG TERM GENERAL RESULTS/OUTPUT/OUTCOME AFTER TWO YEARS PROJECT
- REDUCTION IN INDOOR AIR POLLUTION
 - REDUCTION IN RESPIRATORY AILMENTS, EYE DISEASES
 - ENHANCING WOMEN'S POTENTIAL FOR EARNING.
 - LAND QUALITY IMPROVEMENT THRU BIOGAS DIGESTED SLURRY USE FOR ORGANIC CROP PRODUCTION.

21. Financial Viability: If relevant provide an estimate of when you expect to cover your operational costs through revenues beyond the phase funded by the Development Marketplace? Not more than 200 words.

EVEN THOUGH THE SUBSIDIES ON BIOGAS HAS BEEN WITHDRAWN BY MNES (NOW MNRS) FROM RAJASTHAN STATE A FEW YEARS AGO, GIVING A MAJOR SET BACK FOR ITS IMPLEMENTATION, BUT, BECAUSE OF ENVIRONMENTAL CONCERN IN THE DISTRICT, AND BAMBOO AS THE KEY BUILDING MATERIAL FOR GBP AND SUCCESS OF A FEW DEMONSTRATION PLANTS CONSTRUCTED, WAFD WOULD GET GOOD SUPPORT FROM THE DISTRICT ADMINISTRATION FOR ITS IMPLEMENTATION.

WAFD IS ALREADY IMPLEMENTING MICRO FINANCING BASED INCOME GENERATION ACTIVITIES FOR POOR WOMEN IN ANOTHER BLOCK OF BHARATPUR DISTRICT, WITH THE BACKUP SUPPORT AND INITIAL SEED FUNDING BY GRAMEEN TRUST, BANGLADESH WHO HAVE ALSO TRAINED A FEW STAFF (INCLUDING THE EXECUTIVE DIRECTOR). THIS APPROACH WILL BE ADOPTED IN COMBINATION WITH SUBSIDIES TO THE BENEFICIARIES ON PILOT BASIS IN THIS IDM PROJECT. RECOVERY OF LOAN (THOUGH NOT SUBSTANTIAL), EITHER IN CASH OR IN KIND FROM ORGANIC GRAINS PRODUCED USING DIGESTED SLURRY AS MANURE WILL BE UTILIZED FOR EXTENDING GBP BUILDING ACTIVITY BEYOND THIS PERIOD.

THE LEARNING FROM THIS PARTIAL SUBSIDIES-CUM-MF APPROACH WOULD BE USED BY WAFD TO PRESENT PROPOSAL TO OTHER DONORS AND FINANCING INSTITUTIONS FOR LARGE BIOGAS IMPLEMENTATION PROGRAM. THUS IN THE LONG TERM WAFD WILL BE ABLE TO MEET ENTIRE OPERATIONAL COST THROUGH REVENUE GENERATION.

22. Sustainability: Describe how you will overcome major challenges that your project/ organization faces and how you will overcome. Describe the extent to which your project addresses environment problems or generates environmental benefits. Not more than 200 words.

LONG-TERM GOAL IS TO TRANSFORM THESE 12 VILLAGES INTO PEOPLE-CENTERED MODEL SOLAR ECO-VILLAGES. BASED ON AVAILABLE RESOURCES ALL FORMS OF RENEWABLE ENERGY, ENVIRONMENTAL AND ECOLOGICAL RELATED INTERVENTIONS ARE BEING MADE WITH ACTIVE PARTICIPATION OF 48 MOTIVATORS-CUM-TRAINER VOLUNTEERS AND LOCAL PEOPLE.

MAJOR EMPHASIS IS ON TRAINING AND CAPACITY BUILDING OF THESE 48 VOLUNTEERS, COMING FROM FARMING COMMUNITY WHO ARE WELL AWARE ABOUT THE LOCAL FARMING SITUATIONS AND THE VILLAGE COMMUNITY. VOLUNTEERS ARE ONLY PAID TOKEN HONORARIUM DUE TO SUCH PROVISION IN THE PROJECT. IN VIEW OF THIS WHEN WAFD WITHDRAWS FROM THESE VILLAGES AFTER THE COMPLETION OF THE EVD PROGRAM, THESE VOLUNTEERS WILL CONTINUE WITH THE ON-GOING PROGRAM ON THEIR OWN, THUS THIS PROJECT WILL BE SUSTAINABLE.

GRAMEEN BANDHU MODEL USES ENVIRONMENTALLY-FRIENDLY BAMBOO FOR REINFORCEMENT BY REPLACING BRICKS, IN THE EXISTING INDIAN FIXED DOME BIOGAS MODEL, NAMED DEENBANDHU, WHICH IS ECOLOGICALLY UNSUSTAINABLE, DUE TO CAUSING ATMOSPHERIC POLLUTION BECAUSE OF BURNING OF COAL AND OTHER BIOMASS FOR BAKING.

GRAMEEN BANDHU BIOGAS PLANT WOULD PREVENT RELEASE OF FREE METHANE (FROM THE EXISTING PRACTICE OF MAKING MANURE IN HEAPS IN MOST UNHYGIENIC MANNER), WHICH IS 20% MORE POTENT GREEN HOUSE GAS THAN CARBON DIOXIDE, IN ATMOSPHERE. THUS IT WOULD HAVE MORE ENVIRONMENTAL BENEFITS.

23. Replicable and Scaling-Up: What is the possibility of implementing your idea/ project elsewhere (in different regions)? What is the potential for this idea to be scaled-up or applied on a large scale? Not more than 200 words.

THE IDEA CAN BE REPLICATED EASILY IN ANY PLACE IF THERE IS MILK ANIMALS, AND BAMBOO IS AVAILABLE. VILLAGE LEVEL MOTIVATORS-CUM-TRAINER VOLUNTEERS AND THE LOCAL VILLAGE COMMUNITIES CAN BE TRAINED TO IMPLEMENT AND SPREAD THE PROGRAM.

INSEDA HAS COORDINATED, COMPILED, PREPARED AND EDITED A "FINANCIAL MANUAL ON MICRO FINANCE BASED SUSTAINABLE ENERGY SOLUTIONS FOR POVERTY REDUCTION IN SOUTH ASIA". THIS WAS PREPARED AS A PART OF THE INFORSE SOUTH ASIAN PROJECT ON CAPACITY BUILDING OF NGOS ON SETS SOLUTIONS FOR POVERTY REDUCTION IN ASIA. ONE OF THE KEY PARTNERS IN THIS PROJECT IS GRAMEEN SHAKTI, BANGLADESH AND WAFD IS ONE OF THE PARTNERS AND MADE CONTRIBUTION BASED ON ITS PRACTICAL EXPERIENCE IN EVD AS WELL AS MICRO FINANCE PROJECTS FOR EMPOWERING POOR WOMEN AT BHARATPUR. THIS MANUAL WILL BE USED AS ONE OF THE TRAINING MATERIALS BY WAFD AND INSEDA TO TRAIN GRASSROOTS NGOS INTERESTED IN THE REPLICATION AND SCALING-UP OF THE IMPLEMENTATION OF GRAMEEN BANDHU BIOGAS PLANT IN DIFFERENT REGIONS OF INDIA INCLUDING SOUTH ASIAN COUNTRIES THROUGH THE NGO NETWORK OF INSEDA AND INFORSE USING MICRO-FINANCING APPROACH FOR IMPLEMENTATION, TO ENSURE SUSTAINABILITY OF THE PROGRAM AS WELL AS OF THE IMPLEMENTING NGOS.

PROJECT COSTS

24. Provide a rough estimate of the budget for project activities wherever applicable

PROJECT BUDGET FOR TWO YEARS PERIOD

A).	CONSTRUCTION OF GRAMEEN BANDHU PLANT (30)	:
B).	TRAINING PROGRAM	:
C).	AWARENESS CAMPS	:
D).	STAFF REQUIREMENT	:
E).	INSEDA'S TECHNICAL SERVICE & BACK-UP SUPPORT	:
F).	OFFICE SET UP, EQUIPMENT AND MAINTENANCE	:
G).	TRAVEL COST	:
H).	ACCOUNTING, AUDITING & STATUTORY REQUIREMENT	:
I).	MID TERM EVALUATION	:

J).	TOTAL (A TO I)	:
K).	WAFD'S OVERHEAD AND INSTITUTIONAL CHARGES (15% OF J)	:

I.	TOTAL PROJECT COST (J +K)	:
II.	LOCAL CONTRIBUTION (21% OF THE TOTAL PROJECT COST)	:
III.	GRANT REQUESTED FROM DONOR AGENCY	:
		<u>USD</u>
		(@ 1 USD =)

NOTE ON BUDGET ESTIMATE:

- Out of the 54.75% local contribution towards the plant construction, maximum of 24.75 will go towards subsidies to plant owners (minimum of 10% to a maximum of 40%), the poor will get a maximum of 40% of the cost of the GBP, either 1 or 2 CuM capacity. The balance of 30-40% will go towards loan on easy installment to plant owners, more loans to poor and less to others who want small loan. Modality will be worked out after the project is sanctioned by the World Bank.
- Audit fees will e Rs. 5,000 per year and Accounting and other statutory cost will be Rs. 20,000 per year.
- Mid term evaluation will be done after the first year
- The training cost will also include cost of typing aid and related materials (including photos etc) for Photo documentation for promoter-cum-trainer volunteers.
- Awareness cost also includes cost awareness visit for women, youth and promoter-cum-trainer volunteers to sites where the Grameen Bandhu plant would be built during the project.
