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50 Programs and Activities Developed as Solutions to Community Challenges in Community Based Adaptation, DRR, Forestry, and Water Management

This Udemy Course has been created from courses that I developed and that I teach at the Center for Sustainable Development. People from <u>150 countries</u> have participated in those CSDi online field courses developing real projects on-the-ground. This has given me an unusual vantage of challenges faced by community members worldwide—and of potential solutions.

The CSDi courses are different than the Udemy courses: they have live course facilitators that provide guidance and consultancy on each of your step-by-step assignments. You can learn more here.

Working with students in the early stages of project design, course facilitators provide a consulting role in helping students to develop programs and activities designed to address their community's challenges. Each program is fine tuned to fit specific regional or community context. Because of universal challenges faced by communities in both adaptation and DRR, the majority of these programs have a strong connection to water use management, forest restoration and management, livelihoods, agriculture, and building community resilience.

I have selected a range of solutions from the field projects that we feel are classic: the best programs that students have used successfully on-the-ground. Many of the programs are highly specific to one student's project and will need to be adapted to fit yours. Many of the programs have a number of alternative activities—these are to give you options for customizing your own programs: edit the activities down as you see fit for your project

Although many of the programs and activities below are cross-sectoral, they are loosely grouped into the following categories:

- Water
- Agriculture
- Health, Hygiene and Nutrition
- Income Generation
- Disaster Risk Reduction and Preparedness
- Advocacy
- Forestry
- SIDS and Coastal Challenges
- Social Programs

WATER

Water Use Management Plan [Solution to underlying causes: Lack of Water Use Management Plan.]

- [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of water use.
- [Activity 2]. Consultation with water management expert to develop a participatory process and training program
- [Activity 3]. Facilitate the Organization of a community based Water Use Management Committee
- [Activity 4]. Community workshop on participatory mapping of water resources and uses (consciousness raising)
- [Activity 5]. Prioritize water springs, rivulets, ravines and man-made waterways for protection/restoration
- [Activity 6]. Investigate water sourcing alternatives for the community
- [Activity 7]. Committee participatory workshop on developing a community based Water Use Management Plan
- [Activity 8]: Investigate and develop an installation and maintenance program for appropriate water sourcing alternatives
- [Activity 9]: Data collection to identify scientific baseline data and facilitate the organization of a community based Monitoring and Evaluation Committee

Water Use Management Plan [Solution to underlying causes: Lack of Water Use Management Plan.]

- [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of water use and management.
- [Activity 2]. Consultation with water use management expert to develop a participatory process and training program
- [Activity 3]. Facilitate the Organization of a community based Water Use Management Committee
- [Activity 4]. Community workshop on participatory mapping of water resources and uses, and degraded watersheds (consciousness raising)
- [Activity 5]. Prioritize water springs, rivulets, ravines and man-made waterways for protection/restoration
- [Activity 6]. Investigate and develop water sourcing alternatives for the community
- [Activity 7]. Investigate underlying causes of flooding and potential adaptation/mitigation actions
- [Activity 8]. Committee participatory workshop on developing a community-based and implementable Water Use Management Plan

Land Use Management Plan [Solution to underlying causes: Lack of Land Use Management Plan.]

- [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of land use.
- [Activity 2]. Consultation with land use management expert to develop a participatory process and training program
- [Activity 3]. Consciousness-raising workshop for community members on land degradation and collective land management
- [Activity 4]. Facilitate the Organization of a community based Land Use Management Committee
- [Activity 5]. Community workshop on participatory mapping of forest, water and land resources and uses-and degraded hotspots
- [Activity 6]. Committee participatory workshop on developing a community-based and implementable Land Use Management Plan
- [Activity 7]. Consciousness-raising workshop for community members on improving the environment around their houses.

Community-level Water Harvesting Program [Solution to underlying causes: Lack of knowledge of Water conservation.]

- [Activity 1]. Community-based survey with community members to identify their knowledge of water harvesting.
- [Activity 2]. Evaluate results of participatory mapping of water resources and select appropriate water harvesting techniques
- [Activity 3]. Share these techniques with Water Management Committee for feedback
- [Activity 4]. Community participatory workshop on water harvesting techniques

Household Rain water harvesting and storage system program [Solution to underlying causes: flooding causing pollution of drinking water]:

- [Activity 1]. Awareness workshops on simple water purification system and follow-up
- [Activity 2]. Awareness workshops and demonstrations on establishment of rain water harvesting and storage system in the village
- [Activity 3]. Work with local designers and material providers to design appropriate rainwater harvesting systems
- [Activity 4]. Develop a program to facilitate the provision of these rainwater harvesting systems
- [Activity 5]. Provide training workshops and follow-up in the construction, installation, use and maintenance of rainwater harvesting systems

AGRICULTURE

Improved water management and irrigation program [Solution to underlying causes: Climate variability, unpredictable rainy and dry seasons] [Activity 1]. Facilitate the organization of an irrigation management subcommittee of the land management committee.

[Activity 2]. Consultation with irrigation expert to develop a participatory process and training program

[Activity 3]. Community workshop on participatory mapping of water resources and uses

[Activity 4]. Work with committee members and irrigation expert to design and an appropriate system that can be managed by the community

[Activity 5]. Facilitate the formulation of a management plan for the newly-installed irrigation system.

[Activity 6]. Workshop in management and maintenance of the irrigation system with follow-up.

[Activity 7]. Establish a pilot community weather station.

Farmer Soil Conservation and Water Conservation and Management Program [Solution to underlying causes: Climate variability, extreme weather, and unpredictable rainy season have reduced crop harvests]:

- [Activity 1]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops
- [Activity 2]. Participatory mapping and identification of local soil conditions, natural water sources and water challenges
- [Activity 3]. Farmer workshop on soil restoration and conservation techniques
- [Activity 4]. Farmer workshop on water harvesting, conservation and management techniques

Farmer Extension Adaptation Program [Solution to underlying causes: Unpredictable/late start to rainy season; mid-season drought/early end to rainy season have reduced crop harvests.]:

- [Activity 1]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops
- [Activity 2]. Participatory mapping and identification of local crop and buffering challenges
- [Activity 3]. Farmer workshop and follow-up on early maturing and/or drought resistant crops/varieties for adapting to climate variability
- [Activity 4]. Farmer workshop and follow-up on buffering against the late arrival of rain and/or an early end to the rainy season

Long Version:

[Problem 2] Vulnerability to climate change impacts and lack of adaptive capacity

Improved Agricultural Practices Program [solution to underlying cause: Inappropriate agricultural practices - loss of traditional agricultural knowledge]:

[Activity 1]: Surveys and interviews to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies

[Activity 2]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops

- [Activity 3]. Community workshop on participatory mapping of water and land resources and uses, agricultural challenges and vulnerabilities—and degraded hotspots
- Activity 4]. Extension agent visits most affected farmers to identify exact CC impacts to crop production and needs of farmers to adapt to the impacts (diseases, droughts and floods)
- [Activity 5]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity
- [Activity 6]: Establish pilot plots demonstrating better cultivation practices
- [Activity 7]: Farmer workshops on soil restoration and conservation techniques
- [Activity 8]: Farmer workshops on water harvesting, conservation and management techniques
- [Activity 9]. Workshops on crop diversification and drought resistant crops.

Short Version:

Improved Agricultural Practices Program [solution to underlying cause: Inappropriate agricultural practices - loss of traditional agricultural knowledge]:

- [Activity 1]: Surveys and interviews to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies
- [Activity 2]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops
- [Activity 3]. Community workshop on participatory mapping of water and land resources and uses, agricultural challenges and vulnerabilities—and degraded hotspots
- [Activity 4]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity
- [Activity 5]: Farmer workshops on soil restoration and conservation techniques
- [Activity 6]: Farmer workshops on water harvesting, conservation and management techniques

Conservation Agriculture/Agroforestry Programme 1 [Solution to underlying causes: Unpredictable/late start to rainy season; mid-season drought/early end to rainy season have reduced crop harvests.]:

- [Activity 1]: Surveys and interviews to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies
- Activity 2]: Identify expert specialist/extension agent in soil, water conservation agriculture and agroforestry to design and facilitate participatory workshops
- [Activity 3]. Introduction of community members to conservation agriculture/agroforestry concepts
- [Activity 4]. Community workshop on participatory mapping of water and land resources and uses, agricultural challenges and vulnerabilities—and degraded hotspots
- [Activity 5]. Farmer workshop and follow-up on conservation agricultural techniques
- [Activity 6]. Farmer workshop and follow-up on agroforestry techniques
- [Activity 7]. Establishment of village tree nursery

Climate Smart Agricultural Practices Programme 1 [Solution to underlying causes: Unpredictable/late start to rainy season; mid-season drought/early end to rainy season have reduced crop harvests.]:

- [Activity 1]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops
- [Activity 2]. Participatory mapping and identification of local crop and buffering challenges
- [Activity 3]. Farmer workshop and follow-up on early maturing and/or drought resistant crops/varieties for adapting to climate variability
- [Activity 4]. Farmer workshop and follow-up on buffering against the late arrival of rain and/or an early end to the rainy season

Climate Smart Agricultural Practices Programme 2 [solution to underlying cause: Inappropriate agricultural practices - loss of traditional agricultural knowledge]:

- [Activity 1]: Surveys and interviews to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies
- [Activity 2]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops
- [Activity 3]. Community workshop on participatory mapping of water and land resources and uses, agricultural challenges and vulnerabilities—and degraded hotspots
- [Activity 4]. Extension agent visits most affected farmers to identify exact CC impacts to crop production and needs of farmers to adapt to the impacts (diseases, droughts and floods)
- [Activity 5]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity
- [Activity 6]. Design program to equitably provide agricultural tools/inputs (payments over time? Government support? Micro credit NGO? Village Bank Revolving Account?)
- [Activity 7]: Establish pilot plots demonstrating better cultivation practices
- [Activity 8]: Conduct Farmer workshops on soil restoration and conservation techniques
- [Activity 9]: Conduct Farmer workshops on water harvesting, conservation and management techniques
- [Activity 10]. Workshops on crop diversification and drought resistant crops.

Climate Smart Agricultural Practices Programme 3: Farmer Field School [Solution to underlying causes: Climate variability and change (delayed, unpredictable start and ending of the rainy season and unusual dry periods), and extreme weather events—and—Lack of support for and knowledge of sustainable agricultural practices]:

[Activity 1]: Surveys and interviews alongside activity 2 above to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies

- [Activity 2]. Consultation with an agricultural expert (extension agent?) to develop a participatory process and training programme including Farmer Field School (FFSs) Approach
- [Activity 3]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity

[Activity 4]: Establish FFS(s) where farmers will set-up pilot plots demonstrating conservation agriculture practices paired with their cultural practices

Activity 5]. Design program to equitably provide agricultural tools/inputs (payments over time? Government support? Micro credit NGO? Village Bank Revolving Account?)

[Activity 6]: Conduct Farmer Field School leaders' workshops on soil restoration and conservation techniques

[Activity 7]: Conduct Farmer Field School leaders' workshops on water harvesting, conservation and management techniques

Agricultural Energy Use Management Plan [Solution to underlying causes: High energy costs.]

- [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of energy use.
- [Activity 2]. Consultation with energy use management expert to develop a participatory process and training program
- [Activity 3]. Consciousness-raising workshop for community members on opportunities for agricultural energy use reduction
- [Activity 4]. Facilitate the Organization of a community based energy use Use Management Committee
- [Activity 5]. Community workshop on participatory mapping of energy uses—and challenges
- [Activity 6]. Committee participatory workshop on developing a community-based and implementable Energy Use Management Plan

Land Use Management Plan for Nomadic Pastoralists [Solution to underlying causes: Chronic malnutrition among livestock: Overall shortage of pasture, Climate variability (prolonged drought from five to ten months over a period of twenty years), and extreme weather events have reduced availability of pastures and water for the livestock]

- [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of land use.
- [Activity 2]. Facilitate the Organization of a community based Land Use Management Committee for Nomadic Pastoralists
- [Activity 3]. Community workshop on participatory mapping of pasture, water and land resources and uses (consciousness-raising)
- [Activity 4]. Consultation with pastoral land use management expert to develop a participatory process and training program
- [Activity 5]. Committee participatory workshop on developing a community based Land Use Management Plan for Nomadic Pastoralists

Animal Husbandry Program [Solution to underlying causes: Limited knowledge of the right numbers to keep, health, hygiene, nutrition and proper care for livestock.]

[Activity 1]: Community-based workshop and survey with community members to identify their knowledge of animal husbandry.

- [Activity 2]: A training program with a view to increase the training level of pastoralists in improving their know-how and skills in herd size, health, hygiene, nutrition, and proper care
- [Activity 3]. Consultation with pastoral animal husbandry expert to develop a participatory process and training program
- [Activity 4]. Periodic training sessions and 12 months of follow-up activities with pastoralists

[Problem 2]. Lack of sources of income generation in the population

Livestock Association and Production Increase Program [Solution to underlying causes: Reduced cattle and agricultural production in the area]:

Activity 1: Facilitate the creation of a Livestock of Association.

- Activity 2: Survey local and regional businesses to determine product/services they need on a routine basis.
- Activity 3: Establish a market link and ask businesses for their help in vocational training programs to develop the products/services they need.
- Activity 4: Using this input, launch workshops on improved livestock practices for these products and services.

Agricultural Income Generation Program [Solution to underlying causes: Lack of income generation opportunities]:

[Activity 1]. Facilitate the organization of a community based Farmer Association

- [Activity 2]. Survey local/regional businesses or markets that buy and sell agricultural produce in order to determine products they need on a routine basis
- [Activity 3]. Establish a market link and ask the businesses for their support in training programs and inputs for farmers to grow the products they need
- [Activity 4]. Using this input, launch vocational training workshops on improved agricultural practices for these new crops and markets

Agricultural Income Generation Program 2 [Solution to underlying causes: Lack of income generation opportunities]:

[Activity 1]. Facilitate the organization of a community based Farmer Association

- [Activity 2]. Survey local/regional businesses or markets that buy and sell agricultural produce in order to determine products they need on a routine basis
- [Activity 3]. Establish a market link and ask the businesses for their support in training programs and inputs for farmers to grow the products they need
- [Activity 4]. Using this input, launch vocational training workshops on improved agricultural practices for these new crops and markets

[Activity 2] Facilitate the creation of community Information Centre

Activity 5] Community workshop on year-round season cycle to determine right crops and livestock they need to produce/ before and after the floods or natural calamities

Garden Produce Income Generation Program [Solution to underlying causes: Lack of income generation opportunities]:

[Activity 1]. Facilitate the organization of a woman's garden produce Association

- [Activity 2]. Survey local businesses/markets that buy and sell produce in order to determine products they need on a routine basis
- Activity 2. Survey community members that buy produce in order to determine produce they need on a routine basis
- [Activity 3]. Establish a market link and ask the businesses for their support in training programs and inputs gardeners to grow the products they need
- [Activity 4]. Using this input, launch training workshops on improved gardening practices for these new vegetables

HEALTH, HYGIENE AND NUTRITION

Project Outline: Problem list combined with potential interventions/activities/solutions that I chose

[Problem 1]. Chronic diarrhea in small children

Health and Hygiene Program [Solution to underlying cause: little knowledge of health and hygiene]:

- [Activity 1]. Consciousness raising health and hygiene workshop and follow-up
- [Activity 2]. Hand washing workshop and follow-up
- [Activity 3]. Point of use water purification system workshop and follow-up
- [Activity 4]. Kitchen hygiene workshop and follow-up

Health and Hygiene Program [Solution to underlying cause: Unsanitary living conditions, Limited hygiene awareness, Limited access to safe/clean drinking water]:

- [Activity 1]. Community-based (staff, volunteers and children) workshop and survey with community members to identify their knowledge health & hygiene issues
- [Activity 2]. Consultation with health and hygiene expert to develop a participatory planning process
- [Activity 3]. Facilitate the Organization of a community based health and hygiene Committee
- [Activity 4]. Work with expert to develop a master health, hygiene and sanitation plan
- [Activity 5]. Prioritize activities
- [Activity 6]. Consciousness-raising health and hygiene workshop and follow-up
- [Activity 7]. Training plan for volunteers
- Activity 8]. Two step hand washing workshop and follow-up: training workshop for volunteers followed by workshop for orphans
- [Activity 9]. Two step point of use water purification system workshop and follow-up: training workshop for volunteers followed by workshop for orphans
- [Activity 10]. Two step kitchen hygiene workshop and follow-up: training workshop for volunteers followed by workshop for orphans
- [Activity 11]. Two step sanitation workshop and follow-up: training workshop for volunteers followed by workshop for orphans

[Problem 2]. Chronic under-nutrition of children

Family garden and nutrition program [Solution to underlying causes; Seasonal food shortages in the months preceding the harvest]

[Activity 1]. Conduct a food security, food diversity and home gardening survey

[Activity 2]. Workshop and follow-up in family nutrition and home garden planning for nutrition

[Activity 3]. Forming beds and planting seeds workshop and follow-up

Alternatives:

[Activity 4]. Workshop on establishment of fish ponds/aquaculture and follow up

[Activity 4]. Workshop on small livestock (poultry, rabbits, guinea pigs) and follow up

Health and Community Awareness Program: Local Community Health Practitioners [Solution to underlying cause: few health facilities and little knowledge of medical know how]: [Activity 1]. Community-based workshop and survey with community members to identify their knowledge health issues and benefits of having a community health center (consciousness

raising). [Activity 3]. Partner with an NGO/governmental organization with experience in training community-based health workers to develop plan and training program

[Activity 2]. Facilitate the formation of a community-based health center management committee

[Activity 4]. Building/retrofitting health center and facilities

[Activity 5]. Training of local community health practitioners

[Activity 6]. Provide 12 months of follow-up, regular professional support, and regular supplies

Community Health Center Program [Solution to underlying cause: lack of knowledge of health, hygiene, and nutrition]:

[Activity 1]. Consciousness-raising workshop on the benefits of having a community health center

- [Activity 2]. Facilitate the formation of a community-based health center management committee
- [Activity 3]. Partner with an NGO/governmental organization with experience in training community-based health workers
- [Activity 4]. Establish physical location of health Center
- [Activity 5]. Solicit volunteers for receiving training and managing the health center
- [Activity 6]. Establish fee structure for visitors to the health Center

Community-Based Solid Waste Management Program [Solution to cause: poor solid waste management polluting standing water

[Activity 1]. Facilitate the formation of a community-based solid waste management committee

[Activity 2]. Community-based mapping of flow of solid waste

[Activity 3]. Composting workshop

[Activity 4]. Why recycling workshop

[Activity 5]. Establish a recycling center in the community

[Activity 6]. Develop a program for community members to separate waste from recycling materials, and to sort recycling products

[Activity 7]. Advocacy campaign to authorities for assistance in improving solid waste management

[Activity 8]. Design of plan for solid waste management and plan for implementation

SANITATION

Rainy Season Drainage and Sanitation Master Plan [Solution to underlying causes: Inadequate drainage facilities. Climate change related increased intensity of rainfall]

[Activity 1]. Community-based workshop and survey with community members to identify their needs for drainage facilities.

[Activity 2]. Consultation with expert to develop a participatory planning process

[Activity 3]. Facilitate the Organization of a community based Drainage and Sanitation Management Committee

[Activity 4]. Facilitate the Organization of a community based Drainage Management Sub Committee

[Activity 5]. Community workshop on participatory mapping of rainy season drainage challenges

[Activity 6]. Work with expert to develop a master plan and a budget

[Activity 7]. Develop a proposal for presentation to donors

[Activity 8]. Work with the advocacy program committee to develop a presentation for soliciting NGO and government support

Sanitation Master Plan [Solution to underlying causes: Inadequate drainage facilities. Climate change related increased intensity of rainfall]

[Activity 1]. Community-based workshop and survey with community members to identify their needs for sanitation facilities.

[Activity 2]. Consultation with expert to develop a participatory planning process

[Activity 3]. Facilitate the Organization of a community based Sanitation Management Sub Committee

[Activity 4]. Community workshop on participatory mapping of sanitation challenges

[Activity 5]. Work with expert to develop a master plan and a budget

[Activity 6]. Develop a proposal for presentation to donors

[Activity 7]. Work with the advocacy program committee to develop a presentation for soliciting NGO and government support

INCOME GENERATION

[Problem 2]. Lack of livelihood opportunities.

Alternative Income Generation Program [solution to underlying cause: Lack of alternative income generation opportunities]:

[Activity 1]. Facilitate the organization of a community based Income Generation Committee

[Activity 2]. Survey local/regional businesses and markets in order to determine products/services they need on a routine basis

Activity 3]. Establish a market link and ask the business for their support in vocational training programs to develop the products/services they need

Activity 4]. Using this input, launch vocational training workshops on building local capacity for new products and services for new markets

Alternative Income Generation Program [solution to underlying cause: Lack of alternative income generation opportunities]:

[Activity 1]. Facilitate the organization of a community based Income Generation Committee

[Activity 2]. Survey local/regional businesses and markets in order to determine products/services they need on a routine basis

[Activity 3]. Survey skills, capacity, products that community members possess

[Activity 4]. Compare community skills, capacity and products to business survey to identify a potential match

[Activity 5]. Establish a market link and ask the business for their support in vocational training programs to develop the products/services they need

[Activity 6]. Using this input, launch vocational training workshops on building local capacity for new products and services for new markets

Micro-Finance and Financial Literacy Program (Solution to underlying cause: local money lenders lend money with extremely high interest,) [Activity 1] Facilitate a Micro-Finance scheme in the community

[Activity 2] Budgeting and savings training course

[Activity 3] Personal budget and saving plan creation

[Activity 4] Creation of self-help-savings groups and monitoring

| Financial Literacy Program for Multicultural Women Entrepreneurs (Solution to underlying cause of Lack of access to funds and poor knowledge of financial basic skills) [Activity 1]: Budgeting and savings training course [Activity 2]: Personal budget and saving plan creation [Activity 3]: Creation of self-help-savings groups and monitoring |
|---|
| DISASTER RISK REDUCTION AND PREPAREDNESS [Problem 3]. Insufficient resources and capacities to prepare for and respond to the consequences of recurring floods Community-Based Disaster Preparedness and Risk Reduction Program [solution to underlying cause: Increase in the frequency and severity of floods triggered by the climate |
| change]: [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of risk, vulnerability, and traditional coping techniques. [Activity 2]. Organization of a community Disaster Preparedness and Risk Reduction Committee [Activity 3]. Training program for committee leaders [Activity 4]. Community workshop on hazard data collection and risk assessment techniques such as participatory mapping, Participatory Vulnerability and Capacity Assessments (consciousness raising) |
| [Activity 5]. Community workshop on risk reduction, prevention of, preparedness for and responses to disasters. [Activity 6]. Program on access to timely and reliable information and forecasts on the possible occurrence of natural calamities. [Activity 7]. Disaster Preparedness and Risk Reduction Committee develops a risk reduction and disaster preparedness plan |
| Community-Based Disaster Preparedness and Risk Reduction Program 2 [solution to underlying cause: extreme climate transformation has led to flooding during the rainy season destroying all the crops and livestock]: [Activity 1] Community-based workshop and survey with community members to identify their knowledge of risk, vulnerability, and traditional coping techniques [Activity 2] Organization of a community Disaster Preparedness and Risk Reduction Committee [Activity 3] Training program for committee leaders (<i>Disaster Preparedness and Risk Reduction Committee develops a risk reduction and disaster preparedness plan</i>) [Activity 4] Program on access to timely and reliable information and forecasts on the possible occurrence of natural calamities [Activity 5] Community workshop on risk reduction, prevention of, preparedness for and responses to disasters [Activity 6] Community workshops on participatory flood early warning and flood contingency planning [Activity 7] Community workshop and training on life saving skills [Activity 8] Community workshop and training on water hygiene |
| [Problem 3]. Flood Community-Based Flood Mitigation and Adaptation Program [Solution to underlying causes: Climate variability, rise in sea level and floods]: [Activity 1]. Community-based workshop and survey with community members to identify their knowledge of risk, vulnerability, and traditional coping techniques for floods. [Activity 2]. Form Flood Preparedness and Risk Reduction Committee to coordinate activities during flood disaster [Activity 3]. Training program for committee leaders [Activity 4]. Community workshop on hazard data collection and risk assessments techniques such as participatory mapping, Participatory Vulnerability and Capacity Assessments (consciousness raising) [Activity 5]. Community workshops on participatory flood early warning and flood contingency planning. [Activity 6]. Program on access to timely and reliable information and forecasts on the possible occurrence of natural calamities [Activity 7]. Community workshop and training on life saving skills [Activity 8]. Community workshop and training on water hygiene [Activity 9]. Flood Preparedness and Risk Reduction Committee develops a risk reduction and flood and preparedness plan |
| [Problem 1]. Villagers are suffering from the impact of flash floods and landslides Community-Based Flash flood and landslide prevention Program [Solution to underlying cause: Deforestation]: [Activity 1]. Use of bio-engineering methods for slope stabilization and minimization of runoff on degraded land prone to landslide and flash flood [Activity 1]. Training [Activity 1]. Field implementation and follow-up |
| ADVOCACY Advocacy Program for Government Flood Response Support [solution to underlying cause: Lack of knowledge and support on the ways to claim for compensation for the damages]: [Activity 1]. Facilitate the organization of a community Advocacy Program committee [Activity 2]. Consultation with advocacy expert to develop a participatory process and committee training program [Activity 3]. Advocacy Program committee develops an advocacy plan in order to work together with the authorities on the provision of basic flood response support. [Activity 4]. Advocacy program: Make an official claim to the local authorities asking to include on the budget the provision of basic flood response support |
| Advocacy Program for Government/INGO Housing Support [solution to underlying cause: Lack of knowledge and support on the ways to claim for compensation for the damages]: [Activity 1]. Facilitate the organization of a community Advocacy Program committee [Activity 2]. Consultation with advocacy expert to develop a participatory process and committee training program [Activity 3]. Advocacy Program committee develops an advocacy plan in order to work together with the authorities on the provision resilient housing. [Activity 4]. Advocacy program: Make an official claim to the Government/INGO authorities asking to include on the budget the provision of resilient housing |
| Advocacy Program for Government/INGO Drainage and Sanitation Support [solution to underlying cause: poor sanitation and inadequate drainage facilities]: [Activity 1]. Facilitate the organization of a community Advocacy Program committee [Activity 2]. Consultation with advocacy expert to develop a participatory process and committee training program [Activity 3]. Advocacy Program committee develops an advocacy plan in order to work together with the authorities on the provision of sanitation and community drainage facilities. [Activity 4]. Advocacy program: Make an official claim to the Government/INGO authorities asking to include on the budget the provision of sanitation and community drainage facilities |
| Land Rights Program [Solution to underlying causes: Lack of secure rights to land; Poor land policies and laws in place to protect the poor indigenous people] [Activity 1]. Workshop on procedures of land acquisition [Activity 2]. Awareness programs on importance of developing pro poor land laws and policies [Activity 3]. Facilitate the organization of a community Advocacy Program committee [Activity 4]. Advocacy Program committee develops an advocacy plan in order to work together with the authorities |

[Activity 5]. Advocacy program: Make an official claim to the local authorities asking for assistance in Land Rights

FORESTRY

Participatory Forest Management Program [Solution to underlying causes: forest encroachment and poaching]:

- [Activity 1]. Workshop & follow-up on consciousness raising about environmental services and forest stewardship
- [Activity 2]. Facilitate the formation of a participatory forest management committee
- [Activity 3]. Community workshop on participatory mapping of water resources and uses (consciousness raising)

[Activity 4]. Development of Participatory Forest Management Plan

- [Activity 5]. Assessment of appropriate species for planting and locations for planting
- [Activity 6]. Forming groups for establishment and management of tree nurseries, planting seeds workshop and follow-up
- [Activity 7]. Workshops to plant trees in strategic areas
- [Activity 8]. Planting trees along the riparian zones, catchment rehabilitation, protection and conservation

[Problem 2]. River erosion

Participatory Community Afforestation Program [Solution to underlying causes: cutting of trees and river sedimentation and sea level rise]:

- [Activity 1]. Workshop and consciousness raising about environmental services, participatory community afforestation, and forest stewardship
- [Activity 2]. Participatory forest management committee formation
- [Activity 3]. Development of Participatory Forest Management Plan
- [Activity 4]. Assessment of appropriate species for planting and locations for planting
- [Activity 5]. Forming groups for establishment and management of tree nurseries, planting seeds workshop and follow-up
- [Activity 6]. Planting trees along the riparian zones, catchment rehabilitation, protection and conservation
- [Activity 7]. Riparian/riverbanks soil stabilization, dyke construction and rehabilitation

Agroforestry Income Generation Program [Solution to underlying causes: Declining soil fertility and lack of income generation opportunities]:

- [Activity 1]. Introduction of community members to agroforestry concepts
- [Activity 2]. Survey local/regional businesses that buy and sell agroforestry agricultural produce in order to determine products they need on a routine basis
- [Activity 3]. Establish a market link and ask the businesses for their help in training programs for farmers to grow the products they need
- [Activity 4]. Using this input, launch training workshops on improved agroforestry/agricultural practices for these new crops/products
- [Activity 5]. Deliver seeds

[Activity 6]. Establishment of village tree nursery

[Problem 1]. High unemployment rate

Non-Traditional Forest Products Skills and Microenterprise Program [Solution to underlying cause: lack of Microenterprise skills and market opportunities]:

[Activity 1]. Introduction of community members to NTFP concepts

- [Activity 2]. Facilitate the formation of a participatory community NTFP committee/association formation
- [Activity 3]. Non-timber forest products and markets assessment
- [Activity 4]. Association sales and marketing strategy
- [Activity 5]. Participatory vocational skill needs analysis
- [Activity 6]. Non-timber forest products skills development training program
- [Activity 7]. Microenterprise skills development workshops

[Problem 2]. Reduction in vital environmental services of the forest in providing food, medicine and water catchment

REDD+ with Forest Stewardship program [Solution to underlying causes: forest encroachment and poaching]:

- [Activity 1]. Workshop & follow-up on consciousness raising about environmental services and forest stewardship; forest buffer zone and wildlife protection
- [Activity 2]. Participatory community forest stewardship committee formation
- [Activity 3]. Assessment of appropriate monetization programs for environmental services rewards and incentives scheme for forest stewardship and buffer zone workshop and follow-up
- [Activity 4]. Committee plan for participating in monetization program

[Problem 3]. Low productivity of food and tree crops (cocoa and banana) in an agroforestry system

Climate Smart Agroforestry, Farmer Soil and Water Conservation Program [Solution to underlying causes: Climate variability, extreme weather, unpredictable rainy season and prolong drought have reduced crop harvests of cocoa and banana]:

- [Activity 1]. Farmer workshop on soil restoration and conservation techniques in an agroforestry system
- [Activity 2]. Farmer workshop on water conservation and management techniques in an agroforestry system

COASTAL CHALLENGES

[Problem 1]. Lack of a mangrove forest management plan

Mangrove Forest Management Program [Solution to underlying causes: lack of alternative energy source]:

- [Activity 1]. Facilitate the organization of a community-based Forest Management Committee
- [Activity 2]. Workshop on alternative energy sources and the importance of mangroves to the health of their fisheries
- [Activity 3]. Mapping and Identifying degraded mangrove systems
- [Activity 4]. Launching a localized program for restoration of degraded mangroves and mangrove afforestation

[Problem 1]. Increasingly stressed mangrove ecosystem

Mangrove protection Program [Solution to underlying causes: variable weather patterns and rising sea levels]:

- [Activity 1]. Workshop on community involvement for mangrove's restoration or reforestation
- [Activity 2]. Facilitate the organization of the community-based mangrove forests management committee
- [Activity 3]. Mangrove's restoration (by a "put into action" workshop)

[Problem 1]. Increasing erosion of shoreline caused by increase wave actions

- Coastal Ecosystem based adaptation program [Solution to underlying cause: wave impacts at high tide and rising sea level]
- [Activity 1]. Workshop on values of the ecosystem as natural buffers and coastal processes

[Activity 2]. Land use management workshop and follow up

[Activity 3]. Workshop on habitat restoration technique - mangroves and artificial reefs

[Activity 4]. Coastal management planning workshop and follow up

Habitat and Biodiversity Awareness Program [Solution to negative impact on: illegal hunting and trade of manatee parts]:

[Activity 1]: Community based workshop and survey to identify their knowledge of the importance of habitat conservation and biodiversity to their livelihoods

[Activity 2]: Consciousness raising workshops about the importance of habitat conservation and biodiversity to their livelihoods

[Activity 3]. Discussion and community prioritization of developing a long-term plan as a follow-up project to this project

[Problem 1]. Diminishing amount of fish catch

Sustainable Fishing Program [Solution to underlying cause: indiscriminate mechanized fishing]:

[Activity 1]. Facilitate the organization of a community-based committee for improved fishing and disaster management

- [Activity 2]. Advocacy/Awareness program among legislators against indiscriminate fishing and need for stringent regulations against mechanized fishing by big trawlers
- [Activity 3]. Awareness raising and data collection workshop on the benefit of sustainable fishing with pilot group

[Activity 4]. Training workshops on specific techniques for increasing the fishing catch sustainably

[Problem 1]. Decline in income

Strengthening local community managed rules related to net size, time and distance to be travelled in sea, type of fish to be caught) [Solution to underlying cause: a reduction the fishermens' fish catch]:

[Activity 1]: Focus Group Discussions with the traditional institutions of community to establish resource management rules

[Activity 2]. Participatory community fishing stock stewardship committee formation

[Activity 3]: Training for local fishing authority on importance of surveillance for sustainable resource management

[Activity 4]: Production and distribution of an informational flyer.

Improving fishermen capacity for commercial activities [Solution to underlying cause: needing to work through a middleman to reach the local market]:

[Activity 1]. Participatory community fish sales and distribution committee/association formation

[Activity 2]. Fish products and markets assessment

[Activity 3]. Association sales and marketing strategy

[Activity 4]. Installation and training on maintenance of a community owned cold storage facility

[Problem 1]: Depletion of traditional fishing stock -- fish and octopus

Fisheries management program [Solution to underlying cause: Overfishing and destructive fishing]

[Activity 1] Facilitate the organization of a community-based fisheries management committee

[Activity 1] Launch an advocacy campaign with local authorities for the Designation of a marine protected area & an update to fishing area zoning

[Activity 2] Community based marine resource management training, including information on destructive and improved fishing practices

SOCIAL PROGRAMS

Community Youth Activity Program [solution to underlying cause: Youth lack access to recreational, educational (le. public libraries) and safe public spaces.]:

[Activity 1]. Community consciousness-raising meeting on the importance of activities for youth in the community

[Activity 2]. Facilitate the organization of a community youth activity committee or subcommittee

[Activity 3]. Youth town-hall meeting to identifying activities and a place for holding them.

[Activity 4]. Develop a plan for funding, organizing, and maintaining youth activities

Responsible parenting program [Solution to underlying cause: A lack of knowledge of responsible parenting]

[Activity 1]. Facilitate a consciousness-raising workshop with parents on the importance of responsible parenting

[Activity 2]. Meet with an expert on challenges with parenting to develop a participatory plan in developing parental responsibility within the community

Activity 3]. Approach government social programs and request resources and assistance in developing a series of workshops to address these challenges

[Activity 4]. Lead a series of workshops on the different challenges that families find and provide appropriate and doable solutions

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Students project activities have used programs similar to the ones above to focus on over 215 different types of challenges:

Activities for the Elderly Acutely Malnourished Children Adaptation to Climate change Adult Literacy Advocacy Advocacy for the Elderly Afforestation Aaricultural Infrastructure Agricultural Adaptation Agricultural Coping Strategies Agricultural Income Generation Agricultural Vulnerabilities Agriculture Agrobiodiversity Agroecology Agroecotourism Agroforestry Alternative Livelihoods Alternative Transportation Animal Husbandry Aquaculture/Mariculture Artificial Reefs **Bicycle Paths**

Income Generation Indoor Air Pollution Irrigation Land Degradation Land Use Management Latrines Leadership Linking Artisans to Markets Linking Farmers to Markets Livestock Association Livestock Protection/Weather Extremes Mangrove Restoration & Conservation Marine Conservation Program Marine Resource Management Market Development Market Linkages Market Survey Marketing and Networking Skills Marketing of Crops Marketing of Livestock Micro-Hydro Micro-Credit Micro-Enterprise

Bio-engineering for Slope Stabilization Capacity Building for Farmers Capacity Building for Women Cassava: Disease Resistant Civic Leadership Climate Smart Agriculture Climate Smart Agroforestry Coastal Management Coffee Production Cold Storage Fish Facility Community Based DRR Community Based Flood Adaptation Community Based Flood Mitigation Community Based Forestry Community Development Committee Community Health Community Health Center Community Health Promoters Community Management Committees Community Organization **Community Youth Activities** Composting **Composting Toilets** Conservation Conservation Tillage **Coral Reef Preservation Crop Diversification** Deaf in Zambia Deforestation Degraded Watersheds Restoration Direct Marketing Agricultural Products Disaster Preparedness **Disaster Resistant School Construction** Disaster Risk Management **Drought Mitigation** Drug Abuse Ecotourism Education Educational Advocacy Elderly Care Facilities **Emergency Preparedness** Employment Services Empowering the Elderly Empowerment of Women Entrepreneurialism **Environmental Sanitation Environmental Services** Environmental Sustainability Family Gardens and Nutrition Family Planning Farmer Association Farmer Soil and Water Conservation Farmer to Farmer Schools Farmer Training Farmer Water Conservation Financial Literacy Fisheries Management Fishing Stock Stewardship Flood Early Warning Flood Mitigation Flood Resilience Program Flood Response Food and Nutrition Food Preservation Food Processing Food Security Forest Conservation Forest Restoration Forest Stewardship Fundraising Garden Fence Installation Greenhouse Agriculture Habitat Conservation Habitat Restoration Hazard Mapping Health Health and Hygiene

Micro-Finance Micro-Irrigation Micro-Savings and Loan Program Migration/Family Disintegration Money Management Monitoring & Evaluation Mulchina Natural Resource Degradation Natural Resource Management Neighborhood Clean-up Non-Timber Forest Products Nutrition Nutrition and Food Diversity Organizational Strengthening Orphans Parental Involvement Parental Responsibility Participatory Afforestation Participatory Forest Management Committee Participatory Hazard Mapping Participatory Mapping Participatory Mapping of Water Resources Participatory Monitoring & Evaluation Participatory Reforestation Participatory Tree Planting Pastoral Land Use Management People with Disabilities Permaculture Center Piped in Water/Wells/Infrastructure Post Harvest Management Preserving Traditional Culture Preserving Traditional Knowledge Project Management Projects by Category Protection of Cultural Patrimony **Provide School Materials** Public Health Rainforestation Farming Rainwater Harvesting Range Management Recycling REDD+ Reforestation Refuse Management Reproductive Health Resilience to Extreme Weather Conditions Resilience to Weather Variability Restoration **Rice Farming River Conservation** Safe Water Sanitation Savings Program School Drop Outs School DRR Sedimentation Reduction Program Sexual and Reproductive Rights Small Animal Production Social Assistance Soil Conservation Soil Restoration Soil, Water & Natural Resource Conservation Solar Ovens Solid Waste Spring Protection Storm Water Management Supply Chains Surface Water Management Surveillance for Sustainable Resource Management Sustainable Livelihoods Sustainable Tourism Synergistic Agroforestry Tree Seedling Nurseries Value Chains Vocational Skills Training Vocational Training Water Conservation

Health and Traditional Knowledge Home Gardens Household Energy Efficiency Human rights Hygiene and Sanitation Program Improved Agricultural Practices Improved Cook Stoves Water Harvesting Water Hygiene and Purification Water Pump Installation and Maintenance Water Purification Water Supply Program Water Use Management Youth Programs & Mentoring

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