



Community Development Advocacy Foundation



# TRAINNING HAND BOOK

*...Valuing nature valuing community.*



## PREFACE

**O**il producing communities in Niger Delta area of Nigeria have been negatively impacted by gas flaring. The inhabitants of these communities are on a daily basis being exposed to hazardous and obnoxious nature of gas flare-flame and gases which they use to process local foods. These activities have had a negative impact on the health of women and young people. The people use these gas flare flames to dry fish, groundnuts, yam, plantain (for yam and plantain flour) and tapioca (locally referred to as kpokpo garri, a delicacy from Cassava). The health impact comes from the inhalation of toxic gases produced by the flares and through the consumption of these processed food items.

The handbook is aiming to enlighten the people on the negative health impacts of gas flaring and proffer solutions to the health challenges and strategies for mobilizing community action against gas flaring.



## ACKNOWLEDGEMENT

This handbook by Community Development Advocacy Foundation (CODAF) is focused on addressing the health impact associated with gas flaring in Nigeria and community mobilization approach against it. We appreciate, Ubrei-Joe M. Mariere for writing the handbook and Benin E. Richard for editing the entire work.

We specially thank those who worked so hard to give this handbook its design and the entire makeup.

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## **Training procedures and timeline**

The training will follow the pattern stated below:

- |   |               |
|---|---------------|
| 1. Registration and sitting commencing training   | 1 hour before |
| 2. Introduction of community representatives  | 10 minutes    |
| 3. Welcome comments and expectations<br>Community Representatives                                 | 10 minutes    |
| 4. Training overview by CODAF Officer   | 20 minutes    |
| 5. Breaking out into sessions   | 1 hour        |
| 6. Break  | 20 minutes    |
| 7. Report back  | 30 minutes    |
| 8. Addressing the questions   | 30 minutes    |
| 9. Drawing up action plans for community<br>Mobilization against gas flaring by members<br>Of CEC | 1 hour        |
| 10. Rounding-off and closing formalities  | 20 minutes    |



## MODULE 1

### 1.0 Introduction

Most of the oil and gas activities in Nigeria take place within the Niger Delta on land, in shallow waters offshore and deep waters, some in excess of 2000 meters in depth. When Crude oil is extracted from the soil, it often comes with associated gases which must be separated from the crude to produce fine export quality oil. In Nigeria, this is mostly done by the burning of associated gases, otherwise known as Gas Flaring.

Gas flaring is the burning of natural gas that is associated with crude oil when it is pumped up from the ground. During oil exploration gas and water is extracted alongside with oil. Water and oil can easily separate from each other, but the only way to separate gas from the oil is to burn it off.

In Nigeria, gas flares burn 24 hours every day, every day of each month, every month of each year and every year of each decade. For years this gas has been polluting the atmosphere by oil companies. Gas flaring thus negatively impacts upon the quality and quantity of human life. According to a 2013 report, it was estimated that the Niger Delta region has about 123 flaring sites, thereby making Nigeria one of the highest emitter of greenhouse gases in Africa. Exposure to hazardous chemicals, emissions and pollutants associated with oil and gas production is likely to be more in those that reside within ten (10) kilometers square radius to these facilities.

Gas flaring started at the end of the Colonial Rule. Though, Shell and BP started exploring for oil in the Niger Delta in the 1930s, while the first field was discovered at Oloibiri, Bayelsa State in 1956. Since then members of host communities' sources of livelihood, which is farming, hunting and fishing have been greatly devastated.

This handbook is set to reveal the health, environmental, social and economic impacts associated with gas flaring in our communities. This handbook has been designed to train members of the Community Environmental-watch Committee (CEC), which is made up of women, men and young people with special consideration to the most vulnerable groups to environmental disaster (Women and young people).

The training exercise is for the community people, they will own the process during the training and they should take advantage of the training and see that it will eventually help them to tackle the environmental and health challenges they faced as a result of the **gas flaring**. Participants will breakout into respective communities of about 6-10 persons per group (depending on the total numbers) and examine all the sessions in this handbook. At the end of their interaction they will do a feedback in response to the questions raised in each sessions and make possible recommendations.

### 1.1 Types of Gas Flaring

Two flaring methods are mostly employed by Oil Companies to burn off associated gases produced during oil explorations. Each of these methods both has their negative effects on nature and community but in different capacity. The two methods are:

**Elevated or Vertical Flare out:** In this kind of flare the gases are made to burn above the surface of the earth within 30 feet and above. This flare-out method affects taller vegetation, the atmosphere and produces a lot of noise and also brightens the cloud at night.



**Fig1. Vertical Flare out**

**Horizontal or Near Ground Flare out:** In this flare method, a lot of radiation and heat is generated coupled with loud noise. Nearby rivers, streams, ponds and vegetation are polluted and destroyed because of the heat. Rural people who leave near this kind of flare sites tend to utilize the heat in processing their food items, including tapioca (Kpokpo Garri), Groundnut and Fish without knowing that they are using their own hands to poison their foods (see module 2).



**Elevated or Vertical Flare out:** In this kind of flare the gases are made to burn above the surface of the earth within 30 feet and above. This flare-out method affects taller vegetation, the atmosphere and produces a lot of noise and also brightens the cloud at night.

## 1.2 Various Oil Companies in the Niger Delta

There are over thirteen multinational oil companies involved in exploration and production activities with six of them accounting for 91% of Nigeria's production output. The six companies are **SHELL** (40%), **MOBIL** (Mobil-Exxon) (22%), **AGIP-ENI** (7%), **ELF** (8%), **CHEVRON** and **TEXACO** (Chevron-Texaco) (14%). Others include **TOTAL**, etc. We have other local Oil Companies and they are: **RAIN OIL**, **NPDC**, **ADDAX**, **CONOIL** etc. All these Oil Companies have their different history due to their contribution to environmental degradation and conflicts in the Niger Delta.

### EXERCISE

Participants will break out into various groups according to the numbers of communities present and undertake the following questions.

1. When did oil exploration begin in your community?
2. What kind of Gas Flare is in your community?
3. Which Oil Company (ies) is operating in your community?



## MODULE 2

### 2.0 Gas Flares and Health

In module one, the meaning of gas flaring was discussed. In this module we will look at the impact of gas flaring on human, plant and animal health.

#### 2.1 What is Health?

In humans, health is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

##### 2.1.1 Your Right to Health

Article 25, of the United Nations' Universal Declaration of Human Rights 1948 states that, "Everyone has the right to a standard of living, adequate health and well-being of him/herself and of his family, including food, clothing, housing and medical care and necessary social services".

Health is briefly addressed in the United Nations' International Convention on the Elimination of All Forms of Racial Discrimination, which was adopted in 1965 and entered into effect in 1969. The Convention calls upon the right to public health, medical care, social security and social services.

### **2.1.2 Violation of these Rights to Health**

From the definition of health by WHO, “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. Any activity what so ever in any community that results to a state of incomplete physical, mental, and social well-being that causes the presence of disease or infirmity violates the rights of man to Health.

## **2.2 Impacts of Gas Flaring on Health**

Gas flaring is one of such activities that violate these rights to healthy living. The implication of gas flaring on human health are all related to the exposure of those hazardous air pollutants such as **carbon monoxide, sulphur oxide, methane gas, hydrogen sulphide, chloroflorocarbon, ozone, and mercury** emitted during incomplete combustion of the gas flare. The health problems associated with gas flaring include the following:

1. Asthma (Chronic Cough)
2. Respiratory arrest
3. Cancer
4. Neurological disorder
5. Reproductive disorder
6. Deformity in children
7. Lung damage
8. Skin problems
9. Anemia and leukemia (Blood diseases)

## **2.3 How to Avoid the Health Challenges of Gas Flaring**

Gas flaring is not moveable, neither the host community. But the people are moveable, the question remain that should the people abandon their homes for the oil companies for their activities to thrive? The only answer that can address this question is a “CAPITAL NO”. The only way to avoid these health challenges is to put off the gas flare. This mission is a very difficult one because it is called for so many resistances from both the host communities and the Nigerian Government. The community can do the following to avoid these health challenges:



1. Stay away from the Gas Flare sites
2. Avoid drinking rain water
3. Avoid eating food processed around the flare sites
4. Don't cultivate food crops around the flare sites
5. Educate others and build resistance

## EXERCISE

The trainees will break into different groups according to the various communities and address the following questions:

1. Are your rights to health been violated? If yes please explain
2. Please list the Health challenges in your community
3. How have you been avoiding Gas Flaring in your community?



## MODULE 3

### 3.0 Gas Flares and Agriculture

The primary occupations of our people include farming, fishing, snail gathering, hunting, craft making and forest products gathering. Agriculture remains a principal activity of rural people. It is a source of income, and employment, an antidote to environmentally induced conflicts; and by extension a source of peace among rural dwellers. In recent times these agricultural activities have been very unproductive due to the activity of Oil Explorations ranging from oil spillage to gas flaring. This is so because flared gases are so hot that nothing grows close to them.

In Nigeria, for example, so much importance is attached to crude petroleum to the detriment of agriculture. The effect of gas flaring on Agricultural productivity is summarized below:

- Effects on the soil physical and microbiological properties of the soil
- High level of acidity of agricultural soil
- Increased in agricultural soil temperature

- Deprivation of soil of necessary fertility for effective agriculture
- Poor agricultural yield
- Migration of animals from around the community
- Bleaching of leaves
- Forest fire and bush burning
- Retardation and stunted plant growth

## EXERCISE

The trainees' breakout into different groups according the number of communities and respond to the following questions:

1. What are the main agricultural activities in your community?
2. Are those, farming around the gas flare sites having good agricultural yields?
3. Please list the reasons for the poor agricultural yield
4. Has there been any form of community action to improve agricultural productivity?



## MODULE 4

### 4.0 Gas Flares and Environment

#### 4.1 What is Environment?

The environment is something you are very familiar with. It's everything that makes up our surroundings and affects our ability to live on the earth, the air we breathe, the water that covers most of the earth's surface, the plants and animals around us, and much more. We have the natural and the built environment, the built environment is directly an act of the interaction of man with the natural environment. The natural environment comprises of water, land and air as well as the vegetations therein. Nearly all the problems of gas flaring have been discussed above and they have direct consequences on the environment. Gas flaring affects the environment in the following ways:

**1. Air pollution:** All the gases released into the environment from gas flare sites are unfriendly to human and other environmental resources, hence it

contaminates the air we breathe in (reduces the % oxygen), water in the atmosphere (**Acid Rain**). It is evident that people that live around gas flare sites are prone to asthma and other respiratory diseases. Eye and skin irritation are another forms of air pollution associated with gas flaring.

**2. Acid Rain:** Acid rain occurs when gases that emanates from gas flare sites accumulates in the atmosphere. This further dilutes the water that falls to the earth as rain to become acidic. Acid rain has the capacity to pollute surface waters, corrode roofs, kill plants and vegetation, destroys clothing and further contaminates food items. Acid rains further acidify the soil and tend to reduce soil fertility and slow down plant growths or ultimately result to their death.

**3. Climate Change:** Climate is usually defined as the "average weather" in a place. It includes patterns of temperature, precipitation (rain or snow), humidity, wind and seasons. Climate patterns play a fundamental role in shaping natural ecosystems, and the human economies and cultures that depend on them. Gas flaring contributes to climate change, which has serious negative implications for both Nigeria and the rest of the world. Gas flaring contributes to climate change by emission of carbon dioxide, the main greenhouse gas.

**4. Water and Soil pollution:** Although this was discussed under acid rain, but the importance of these areas can't be overemphasized. Black carbons from the gas flames are deposited on land and nearby water and when this happens; it results to the acidification of the land and water. In this regard soil microorganisms and aquatic faunas such as fishes etc are grossly affected.

## EXERCISE

The trainees' breakout into different groups according the number of communities and respond to the following questions:

1. Which part of your environment do you think gas flaring has greatly affected in your community?
2. List the havoc gas flaring has done to your immediate environment.



## MODULE 5

### 5.0 Gas Flares and Culture

The people of the oil-bearing enclaves on the other hand, depend on land to grow their food, fish and hunt. Land is central to the social system of the people of the Niger Delta as well as other parts of Nigeria. In this respect, clashes between the people and oil firms are inevitable.

**Food insecurity:** There has been an unusual question “can the rural community feed themselves?” Rural communities' commitment to produce enough food that can serve them from the harvest seasoning to the next planting season and also make some sales to raise money for their financial needs is part of their culture and ways of life. Food production in all oil producing communities has become very difficult because the impact of gas flaring on agriculture is a direct consequence on food security.

**Communal Tension:** Poor agricultural yield as a result of gas flaring leads to weakness in family and communal bonds causing social tensions among various groups and institutions in the society. The acquisition of land by the oil firms for pipelines rights of ways, flow lines, flow stations and gas flaring sites normally engender acrimony between oil firms and host communities. Arguably, land disputes may occur due to ethnic conflict, but in some areas, oil firms aggravate existing land disputes because of their ignorance of existing feud.

**Loss of hope and moral values:** Gas flaring discourages expansion of farm size and quest for the improvement of their sources of livelihoods. The divide and rule tactics of the oil companies makes them to pay deaf ear to the peoples' outcry and demands. The effect of the land acquired for oil and gas activities can be serious on individual land holding as well as the community in general, depriving them of means of subsistence. On the other hand, members of the community have been compelled to drink, cook with, and wash in polluted

water; they eat fish contaminated with toxins. Because of this, women have to go further away from home to find unpolluted water for their domestic chores and farmlands to farm. There is death and possible extinction of medicinal plants and herbs that are rooted in traditional medicine and spirituality of the people as a result of the incursion of the oil industry. There is alarming evidence on the drop in morality in the region, which hitherto used various taboos to check social miscreants. It appears there is a scandalous and promiscuous social concubine age between oil company workers and girls in the host communities. The influx of comparative rich and almost "alien" workers from the affluent oil industry has escalated prostitution in previously "isolated" and stable communities.

### EXERCISE

The trainees' breakout into different groups according to the number of communities and respond to the following questions:

1. Which aspect of culture has been impacted by gas flaring in your community?
2. Give examples of moral breakdown your community have experienced as a result of gas flaring.



## MODULE 6

### 6.0 Food drying and processing

Food drying is a method of food preservation in which various food items are dried to remove excess water using different forms of heat sources. In most traditional societies where gas flaring exists, drying of food items around gas flare sites has replaced the sustainable traditional methods of food preservation. This food drying option has detrimental health challenges; hence it is discouraged from usage.

### 6.1 Traditional Techniques of Food Drying

Traditional techniques of food preservation became available to homes and chefs from the dawn of agriculture until the Industrial Revolution. Most of the methods used in our traditional society today to preserve food are:

**Sun Drying Food Techniques:** Sun drying remained the oldest method of food preservation even before the Stone Age. A good number of foods can be sun-dried. This is done by cutting them into small pieces for faster dehydration.

These classes of food include, cassava extract, yam, plantain, corn, groundnut, fruits, cereals etc. This method is best achieved by drying food items in an elevated rooftops and high fences or locally built solar driers.

**Heating and Smoking:** This method was introduced during the era of the fire age and the industrial revolution. In this method a fire would be built inside the building to provide enough heat to dry the various food items such as fish, meat, crayfish, cassava extract, fruits, vegetables, spices and herbs. Smoking is used to lengthen the shelf life of perishable food items. This effect is achieved by exposing the food to smoke from burning plant materials such as wood. Most commonly subjected to this method of food preservation are meats and fish that have undergone curing. Fruits and vegetables like bitter leave, cheeses, spices, and ingredients for making drinks such as malt and tea leaves are also smoked, but mainly for cooking or flavoring them. It is one of the oldest food preservation methods, which probably arose after the development of cooking with fire. These methods have been more successful in most traditional society because there is no seasonal constrain to it.

**Salting:** Salting or curing draws moisture from meat and fish through a process of osmosis. Meat is cured with salt or sugar, or a combination of the two. Nitrates and nitrites are also often used to cure meat and contribute the characteristic pink color, as well as inhibition of *Clostridium botulinum*. It was a main method of preservation in medieval times and around the 1700s.

**Freezing and Cooling:** Freezing and cooling are also one of the most commonly used processes, both commercially and domestically, for preserving a very wide range of foods, including prepared foods that would not have required freezing in their unprepared state. For example, potato waffles are stored in the freezer, but potatoes themselves require only a cool dark place to ensure many months' storage. Cold stores provide large-volume, long-term storage for strategic food stocks held in case of national emergency in many countries.



## MODULE 7

### 7.0 Strategies for Community Mobilization against Gas Flaring

A process whereby a group of people become aware of a shared concern or common need and decide to take action in order to create shared benefits. It is also a process that involves communication, education and organization, which together lead to community action and development.

#### 7.1 Strategies for mobilization

1. Establish a Formal Structure
2. Secure Strong Leadership
3. Engage Diverse Organizations, Community Leaders and Residents
4. Ensure Authentic Participation and Shared Decision Making
5. Ensure Authentic and Productive Roles for Young People
6. Develop a Shared Vision
7. Conduct a Needs Assessment
8. Create a Strategic Plan
9. Implement Mutually Reinforcing Strategies
10. Create a Fundraising Strategy
11. Establish Effective Channels for Internal Communication
12. Educate the Community
13. Conduct Process and Outcome Evaluations
14. Evaluate the Community Mobilization Effort Separately

#### 7.2 The role of Community Environmental-watch Committee (CEC)

##### 7.2.1 What CEC stand for

Community Environmental-watch Committee is a community network that is made up of men and women who have the responsibility of raising awareness, advocating and building movement and resistance among the people about the present state of their environment.

## **7.2.2 Aim of the CEC**

The CEC performs the following objectives

1. Environmental awareness and sensitization of rural people
2. Self development on strategic negotiations on behalf of communities
3. Promoting community-based advocacy against community encroachment from any sector
4. Keepers and monitors of environmental resources
5. Report to CODAF on issues that borders on environment, health, education and culture

## **7.2.3 Who can be a member of CEC?**

There is no rural community that is crises free in terms of the environment, infrastructural development, health, democracy and governance etc. Therefore any community that is having any form of challenge that needs urgent intervention, or community that hopes to receive any form of development project that may result to environment and health challenges is free to be member of CEC.

## **Conclusion**

CODAF's commitment to campaign against continual flaring of gas led to the design of this handbook to build the capacity of members of host communities to oil and gas facilities to help them build resistance against it. On this note we do hope that oil producing communities will be better organized against gas flaring in their communities and are able to use the platform of the Community Environmental-watch Committee to mobilize for action.





## **About CODAF**

**C**ommunity Development Advocacy Foundation (CODAF) is a non-governmental organization that is registered in Nigeria with focus on environmental advocacy work in Nigeria to bridge the communication gap between policy makers and the grassroots. CODAF is working towards the attainment of sustainable rural development with rural community people to defend their rights to development, and the environment. Our aim is to embark on community development advocacy work, carrying out research and assessment on the environment, livelihood of the Rural people and embark on direct intervention projects, initiate capacity building among rural people to influence government policies, act as a voice for Rural people especially women and children at local, national and international level and raise the level of awareness on issues of community health, environmental governance and human rights.

### **Our Stand**

Valuing Nature  
Valuing Humanity  
Valuing Community

### **Our Focus**

#### **1 . Community Action**

- Community Health Advocacy
- Education Right Advocacy
- Community Development Advocacy
- Conflict management

#### **2 . Environment**

- Environmental Governance
- Energy Democracy & Governance
- Climate Change
- Waste management
- Land Degradation

#### **3 . Agriculture**

- Land grabbing
- Deforestation
- Sustainable/Organic Farming
- Persistent Chemicals

#### **4 . Gender and Youth Action**

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