# **CAMEROON GENDER AND ENVIRONMENT WATCH** (CAMGEW)



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Ministry of Forestry and Wildlife (MINFOF)



Nature Protection and Sustainable Development (MINEPDED)



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# BUSHFIRE GUIDE GUIDE ON BUSHFIRE PREVENTION AND MANAGEMENT AROUND KILUM-IJIM FOREST IN CAMEROON



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#### PROJECT ACKNOWLEDGEMENT

CAMGEW acknowledges receiving support from GEF Small Grant Program under a project titled "Eco-friendly Bushfire Prevention and Management in Kilum-Ijim forest" to build Kilum-Ijim forest community capacity on bushfire prevention and management. This project involved trainings, donation of basic bushfire prevention and management tools, developing of a bushfire prevention and management guide and sensitization materials.

CAMGEW acknowledges gathering some information on bushfire prevention and management from Kilum-Ijim forest community leaders and stakeholders through organized experience sharing sessions. CAMGEW recognizes that she received financial, technical and other support from her partners to maintain the forest biodiversity. This special thanks go to French IUCN (PPI-FFEM), Future in Our Hands-UK, Swisshand Foundation-Switzerland, Bees for Development – UK, Man and Nature (now Noe) – France, Both ENDS – Netherlands, UNDP, UNIDO, Future Food Institute, Energy Globe, Equator Prize, Gender Just Climate Solution Award, Midori Prize for Biodiversity from Aeon Environmental Foundation – Japan in partnership with Convention of Biological Diversity, Full Circle Foundation - Hong Kong, Jac Trust - UK, Green Livelihoods Alliance New England Biolabs Foundation – USA, Global Green Grants, The Pollination Grant, Critical Ecosystem Partnership Fund –CEPF of Birldlife International, MIVA Switzerland, Well Grounded, Creative Action Institute - USA, United Nations Framework Convention on Climate Change Cameroon Ministry of Forestry and Wildlife(MINFOF), BERUDA, Oku Honey Cooperative Society, SOPISDEW, ANCO, AMMCO, CERAF – Nord, ABOYERD, Ministry of Livestock, Fisheries and Animal Husbandry(MINEPIA), Ministry of Women Empowerment and the Family, etc. We are particularly grateful for support received from various Councils, Divisional Officers, traditional authorities, Village Heads, MINFOF staff, MINEPIA staff, FMIs' members and Oku Honey Cooperatives around Kilum-Ijim Forest. The following women institutions have also supported CAMGEW's work: Women Gender Constituency, Feminist and Women's Action Plan Thematic group, Women for Women International and Women Learning Partnership, Women Engage for a Common Future.

#### **BUSHFIRE RATIONALE**

Bushfire around Kilum-Ijim forest area and Bamenda Highland Forest area in general destroy forest biodiversity, water catchments, affect bee farmers by burning their beehives, harm or kill people, prevent research and burn farms. It also destroys Ithe source of ivelihoods of forest users like herbalists and water management committees. Bushfire is caused by hunters, grazers, farmers around the forest in slash-and-burn, mentally challenged persons and cigarette smokers.

Bushfires need to be prevented or managed when they occur. Human life and biodiversity matter. Our farms are a source of livelihood. Considering that poverty and unemployment are still with us and considering that we donot want the situation to get worse we need solidarity which is our own insurance to tackle bushfires. This guide is prepared to build community solidarity to fight bushfire and promote sociocultural, economic and ecological stability. Bushfires occur from the month of December-March and some times to April (when rains delay) in the dry season

This guide should be a source of inspiration to any community leader or member ready to fight bushfire and build stronger community. CAMGEW through her experience working with communities in the Kilum-Ijim forest area since 2010 has gathered this information and is readily sharing with you to help in the fight against bushfire. With this same spirit CAMGEW expects you to add your own knowledge, skills and experience to her own and make your community stronger. We are stronger together especially when we are each other's keeper. This can be demonstrated if we end bushfire.

CAMGEW will keep on working with you to build stronger communities and support them put food on the table.

#### ABOUT CAMGEW

Cameroon Gender and Environment Watch (CAMGEW) is a not-for-profit organization created in October 2007 with authorization number N° 000998/RDA/JO6/BAPP to look for a solution to environmental and women's issues in Cameroon. CAMGEW works locally and thinks globally, integrating gender in solving environmental problems in Cameroon. CAMGEW's Vision is "A society free from poverty, gender inequality and unsustainable environmental practices". CAMGEW's Mission statement is "We do environmental protection by strengthening the capacity of community members especially women and young people in eco-businesses and forest regeneration for livelihood improvement in the Bamenda Western Highland Forest area".

The Kilum-Ijim forest is 20.000 hectare of forest with 44 communities and a population of above 200.000 that lives within a day's walk to the forest. CAMGEW from 2012 to 2021 planted 104.446 bee loving trees in this forest and developed 3 tree nurseries with about 80.000 trees. Environmental Education is a weekly activity for children and adults in CAMGEW offices in Oku and Bamenda and CAMGEW has reached out to more than 70.000 people since creation to build nature lovers. CAMGEW has trained above 2000 bee farmers in honey production, honey, product quality control and bees wax extraction and donated above 1.500 beehives. Bee farmers have been organized into 6 Honey cooperatives around this forest. Beehives donated to trained bee farmers. Women were allocated at least 30% and youths at least 30% of the positions in forest Honey cooperative to encourage them in apiculture. CAM-GEW created a CAMGEW-HONEYSHOP in Bamenda to convert bee farmers honey to money. The Honeyshop sell various honey, bees wax, candles, beesuits, bee smokers, honey wine, honey juice, bees wax soap and powder soap, body lotion, etc. 362 youths and women have been trained on entrepreneurship in honey value chain development. 115 youths and women trained on bees wax soap, powder soap and candle production and 42 youths and women were also trained on honey juice and honey wine production. CAMGEW has succeeded to create 2 Forest multi-stakeholder platforms[one in Oku and another Nso for Bikov] to exchange ideas on forest issues and assist in decision making. The 7 Forest Management Institutions (FMIs) in Kilum forest that manages community forest have been reorganized by CAMGEW and other stakeholders after more than 10 years that their terms of offices ended. 832 farmers have also been trained on agroforestry techniques. As of December 2018, about 1580 women had been trained on business skills and 1325 women received financial assistance in the form of loans of about US\$ 5500 monthly as alternative sources of livelihood to the forest. This served as forest microfinance for women. 24 teenage boys and girls had been trained on dress making, shoe making and hair dressing. 20 teenage girls have been trained on recycling plastics and clothing's with African fabric waste to produce jewels, hand bags, belts, etc. More than 3000 women and girls have received counseling to help them make decisions and get out of social challenges. Where necessary they were supported financially through CAMGEW microfinance scheme to better integrate in society. 400 women were also enlightened on the right to legalization of marriage and 200 women on the mitigation measures to physical, psychological and economic violence. 78 teenage mothers had their capacities improved on nutrition for mother and child from locally available food stuff and 190 teenage girls trained on safe sex to reduce sexually transmitted diseases and unwanted pregnancies. Bushfires reduced from above 7 in 2012 to zero in 2018 and 2019. In 2014, one bushfire alone destroyed many hectares of the forest. In 2017, one bushfire occured and more than 70 community members mainly bee farmers went to forest to tackle and only less than 5 hectare was destroyed. CAMGEW also trained community leaders and stakeholders on bushfire prevention and management and supported them with basic tools and equipment to use in fighting bushfire. The more we train community members to become bee farmers the more bushfire is prevented and managed. No bee farmer want to see his/her beehive burnt so they prevent bushfire and so help in forest protection because **APICULTURE = JOBS** = HONEY = MONEY = FOREST CONSERVATION. CAMGEW-Honeyshop becomes a CLIMATE **SMARTSHOP** because it is an opportunity cost to forgone bushfire that cause climate change. The market for honey must be available to engage communities to protect forest.

CAMGEW believes that the future of our mother planet-earth is in the hands of men and women, young and old and also that this planet can be sustained by putting social and environmental justice at the centre of development.

#### ABOUT KILUM-IJIM FOREST

Kilum-Ijim forest is in North West Region of Cameroon and it is part of Bamenda Highland Montane Forest. The forest produces Oku White Honey- certified as Geographic Indication Product which is cherished nationally and internationally. The forest covers 20.000 hectares with its peak at 3011m and a Crater lake called Lake Oku at 2500 m altitude. Kilum or Oku Mountain is the second highest mountain in Cameroon and also in Central and West Africa. It has a rich ecosystem with non-timber forest products like Oku White honey, stingless bee honey, mushrooms, medicinal plants, spices, etc. Oku White Honey is produced by trees like Nuxia congesta, Prunus africana, Schefflera abyssinica, Schefflera manni. Only 2 of these products are certified in Cameroon with the other being the Penja White pepper. Much bees wax is extracted from honey locally and sold without transformation. The Kilum-Ijim forest area has a rich culture and is a tourist destination. Carving is highly practiced there.

The Kilum-Ijim forest hosts the first community forests in Cameroon. There are 18 community forests in Kilum-Ijim forest and a Plant Life Sanctuary around the Lake surrounding. The forest is the largest remaining habitat for Bannermans turacco-a red feathered bird that is only found in the Bamenda Highland Region and is classified by IUCN Redlist as endangered. The major threat to the forest is bushfire which destroy forest biodiversity and beehives which is a source of community livelihood.

Despite the availability of this rich forest with a huge potential to be unblocked to benefit its people, the forest people still suffer from unemployment, high poverty, gender inequality and lack of basic facilities. There is lack of inclusiveness in the management and benefits from the forest. Forest resource exploitation is dominantly masculine.

However, the area around Kilum-Ijim forest is one of the most densely populated in Cameroon: 300,000 people live within less than one walking day from the forests. There is indiscriminate harvesting of forest resources like Prunus africana (flagship species) and this has dramatically reduced important tree species populations reducing community income sources. The forest is vulnerable to many threats such as encroachment, farmer-grazer conflict, deforestation and bushfires that endanger the ecological

#### balance.

The engagement of the community forest management institutions (FMIs) and population in biodiversity protection needs to be guaranteed through conservation actions and livelihood improvement opportunities. The development of beekeeping can reverse the trend by creating new sources of livelihoods for local communities. CAMGEW has been using apiculture as a tool to fight bushfire. She builds capacity building on beekeeping. When community members become bee farmers and own beehives in the forest they prevent bushfire and if bushfire occurs they directly put it off to protect their beehives. CAMGEW supports the bee farmers to improve the quality of their products and organize them into cooperatives to ensure a better sale and thus increase their revenue. CAMGEW also assists them look for a market in urban areas and internationally.

There are 18 community forests in Kilum-Ijim forest with 44 villages.

Community forests in Kilum Forest: Bihkov, Nchiiy, Mbai, Emfvemii, Kedjem mawes, Ijim and Upper shinga Community forests in Ijim Forest: Juambum, Laikom, Ajung, Yatimuvco, Mbesa, Muteff, Abuh, Mbi, Anyafoma 5, Akeh 1 and Afua/djichami

# **BUSHFIRE OBJECTIVE**

Objectives for this guide on bushfire prevention and management around Kilum-Ijim forest area are:

- To promote Knowledge, experience and skill sharing on bushfire prevention and management
- Identification of stakeholders and actors to engage on bushfire prevention and management
- To prevent and manage conflicts that create/result from bushfire
- To propose solution to bushfire prevention and management
- Gather information to use to develop a bushfire prevention and management guide

There is need for the participation of women and men especially youths through team work and solidarity in to bushfire prevention and management

#### **ACTIVITIES THAT CAUSE BUSHFIRE**

Activities that cause bushfire include:

- · Hunting done by hunters in and around the forest area
- Slash-and-burn farming method done by farmers to gain more land or as a method of preparing the farm for planting
- Grazing done by grazers who lack skills in improved pasture cultivation and turn to burn vegetation yearly to get new vegetation for their animals
- Poor honey harvesting by bee farmers in and around the forest area with no training in modern bee keeping and who lack harvesting materials/equipment
- · Cigarette smoking in and around the forest area
- · Activities of mentally challenge around the forest like setting fire to prepare food or for heating
- · Score settling by community members to inflict pain

# COMMUNITY BUSHFIRE PREVENTION AND MANAGEMENT METHODS

In an interactive session, participants should enumerate the local methods they used to prevent bushfires. They should list and explain how bushfire prevention and management is done locally in their community. These local methods could be

BUSHFIRE PREVENTION METHODS		
ACTION	METHOD	
Fire tracing and back burning	The boundary of the forest has to be traced by clearing and removing all vegetation and back burning to prevent fire from leaving the surrounding farms or grazing land to the forest	
Patrols	During the dry season there must be patrols in the forest to watch all activities carried out in and around the forest and also to do forest sensitisation to forest users, grazers and farmers in and around the forest. The team on patrol will be available to put off fire if it is still starting or to alert other community members about any incident for imme- diate action to reduce damage.	
Sensitization against bushfire	There is sensitisation in various groups and individually through social media, town crier, radio, social gatherings, etc. This need to be done by various forest and community actors and stakeholders	
Developing a communication strategy	There is need for a clear communication strategy to alert community members on how to prevent bushfires and how to act smartly when bushfires occur.	

Making known various punishment that awaits defaulters	It is important to make known to the community the va- rious punishments to defaulters. This can be used to scare them from negative activities	
Developing of agroforestry systems in farms around forest peripheries	Many bushfire starts from farms through slash-and-burn. When farms are made evergreen by planting variety of crops that serve as food, prevent erosion and respect fo- rest stratification, bushfire could be avoided because va- rious crops will be ready and harvested at different times and this will always give money to farmers every season thus no need for bushfire through slash-and-burn. Slash- and-burn occurs mostly in farms with few crops that are totally harvested and the farm remain empty or bare.	
Green Firebreaks that separate the forest from the farms with evergreen vegetation	Trees that cannot easily burn, rich in water and evergreen can be planted in a belt around the forest to prevent fire from crossing to the forest. Some of these plant include fig trees, Leuceana, acacia, Sisal Hemp, etc	
Sign letter of commitment on bushfire pre- vention and management measures with every forest user organisations like Honey Cooperatives and users like bee farmers, herbalists	Every forest user must be made aware that without the forest their activities will not exist and therefore must take commitment to be part of the solution that keep the forest alive than being part of the problem that destroys the fo- rest.	
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Community bushfire management training programme	The community members need to be trained on basic fire management and prevention skills. The forest users also need this training. This is necessary for bee farmers to save their beehives from being burnt when bushfire occur.
Banning of smoking in the forest and farms around the forest	Authorities should ban smoking in and around the forest area. The patrollers and all community members must be available to watch against smoking in forest and also sen- sitise smokers. Where they are stubborn they should be reported to competent authorities for action.
Developing other environmentally friendly activities that help fight bushfire like bee far- ming	Community members should be given training opportu- nities to get involved in forest friendly activities for liveli- hood improvement. Some of these activities that will make them use the forest and value the forest are bee farming, medicinal plants, ecoguards, etc

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# **BUSHFIRE MANAGEMENT METHODS**

ACTION	METHOD
Training on bushfire management techniques	Community members need skills on bushfire manage-
	ment
Use of fire suppression techniques (Confine,	It is sometimes good to stop the fire by containing it in one position and preventing it from extending further.
Contain or Control Strategies)	one position and preventing it from extending further.

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	This is done sometimes by fire tracing around the burning area to prevent it from getting further into other forest parts.	
Fire line Safety and First Aid	During bushfire tackling there is need to respect safety measures and have in place a First Aid box to handle any accidents that may occur before moving to the hospital for medical care.	
Fire Volunteers	There are some persons with many skills in bushfire tack- ling that could be in the community or nearby communi- ties and could come to assist put off the bushfires. These skills could be developed through trainings and/or long time experience in managing bushfires. Bushfire occur frequently in some communities.	
Use of water to quench the fire	Considering that Kilum-Ijim forest is a source of many streams. Water is found in almost all sections of the forest. This water could be carried and used to quench the fire.	
Monitor weather	There is need to be strategic in handling bushfire. In the morning, evening and night the fire is not wild and there are better ways to handle bushfire during this period. During the day it is hot and fire is wild with much wind and so more care needs to be taken at this period.	
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Carry away the beehives from the site close to the fire to safer sites	While trying to confine the bushfire in one place bee- hives could be transferred to already protected parts of the forest. It will be bad to lose the forest and beehives that are sources of livelihood.
Turn on radio to get the latest information	The community radio must be listened to get update about the fire. The radio will be there for information and education about the forest fire and how to handle it.

# PRECAUTIONARY MEASURES ON BUSHFIRE PREVENTION AND MANAGEMENT

Prevention of bushfires is better than cure. It is important to be careful before, during and after the bushfire to reduce bushfire impacts. This can be done in the following ways:

- Do the back burning early in the morning or late evenings on sunny days
- After back burning, the fire should be completely put off with water before you leave
- Avoid burning on windy days
- Wider traces are required on slopes because there is a high risk of fire crossing
- · Community members must have skills in First Aid service offer
- Community members should not attempt to manage bushfire without firefighting tools
- Make sure you obey national and local laws regarding bushfires
- Work like a team while putting off bushfire to be sure of each one position and safety. Solidarity is our insurance and so we are all each other's keeper.

#### **EXPERIENCE SHARING**

No one knows everything. Some people know more than others in some aspects because of their exposure. Some people and communities have suffered bushfires many times and so have been able to develop skills and gain experience that they can share with other people and communities. This is why • Communities stronger in bushfire need to share the skills and experience with weaker communities in this domain

- Persons skilled in bushfire management need to share skills and experience with other persons and communities
- Institutions with knowledge, skills and experience in bushfire need to share with communities in need.

### PERIODS THAT MOST BUSHFIRES OCCUR

Most persons who cause bushfire set it when there are fewer or no people around and when the fire grows wild there is no hope to put it off. Most bushfires occurs:

- During public holidays when people are resting at home
- During weekends when forest people are attending other festive events
- During traditional resting days when forest people respect their traditional days by staying home
- On Fridays or Sundays when there is religious services

Records of bushfires in Kilum-Ijim forest have proven this. On 11th February 2014 during National Youth Day when everyone was in the celebration ground in Elak – Oku fire emerged from a farm close to the forest and got into the forest. Before community members could leave the ceremonial ground to go home and change their attire and move to the forest, part of the forest was already burnt.

#### COMMUNITY AND STAKEHOLDER ENGAGEMENT

The community leaders could identify stakeholders that could engage in bushfire prevention and management as focal points. This should include the youth groups, hunters, grazers, bee farmers, religious groups, cultural groups, women groups, and traditional leaders. It is also necessary to make sure that traditional rulers involved in the implementation of bushfire prevention and management strategy in the Kilum-Ijim forest. It is also important to make a list of traditional leaders in each community who will serve as focal points.

#### **TYPES OF PUNISHMENT FOR DEFAULTERS**

The leaders could try to identify various sanctions that could be given to defaulters. Cameroon Law NO.94/01 OF 20 January 1994 on Forestry Wildlife and Fisheries, in its article 156 sanctions the setting of fire on forest to a fine of from 200,000 to 1,000,000 CFA francs or imprisonment for from 1 to 6 months or both such fine and imprisonment. The community leaders suggested that defaulter should be punished or sanctioned according to their crime and circumstances surrounding the crime. Some sanctions could already be implemented and some others could be proposed and added to the list. The following punishments are examples that could be given to defaulters at the community level:

- · Replant trees in forest areas burnt by the fire
- Ban from forest and farming activities in and around the forest

• If the bushfire is as a result of farming, the farm could be taken and given out for rent by the traditional authorities. This would help to recover the losses incurred. This will depend on the intention, gravity and participation of defaulter in community development.

• Defaulter should take care of community members engaged in putting off the fire he/she caused by feeding them, providing them with palm wine to drink and savon to wash their dirty dresses. This could be done while waiting for the real punishment for the crime.

• In some cases a legal action could be launched which could lead to fine, imprisonment or compensation,

### COMMUNICATION STRATEGIES ON BUSHFIRE PREVENTION AND MANAGEMENT

Community leaders need to acknowledge that communication is very important for information and education on bushfire prevention and management strategies. The impact of bushfires and its occurrence could be minimized if a good communication strategy is put in place before, during and after bushfires. The following methods have been identified for possible use in communicating about bushfire prevention and management:

#### Ways of Communication

- Training workshops, seminars, sensitization in social and cultural groups.
- Radio talks in communities.
- Production and distribution of posters/flyers, booklets, Forest signpost
- Town criers.
- Forest users platform (hunters, bee farmers, herbalist, firewood fetchers)
- Men's traditional club like Manjong, Mfuh houses
- Traditional councils
- Forest Management Institution (FMIs) platforms
- Forest Honey Cooperatioves
- One-on-one approach
- · Learning-by-doing in bushfire prevention and management practices
- Group sensitization through schools, Churches, social and cultural groups
- Telephone calls and Social media through whatsapp, facebook, twitter, linkehn, website, etc
- Arts and crafts through drawing, painting, dancing, singing, sketches, etc

#### CONTACTS OF COMMUNITY FOREST LEADERS ON BUSHFIRE PREVENTION AND MANAGEMENT

There is need to have contacts of community focal points for easy communication. The contacts especially telephone contacts should always be available and accessible for discussion on arising issues on bushfire prevention and management in Kilum-Ijim forest. They need to always write reports, prepare attendance list and take necessary pictures for good record keeping. Community leaders should prepare a list of all community radios and other radios whose waves reach their area to promote easy information sharing.

#### **BUSHFIRE CALENDAR**

There is need to know which activity could be carried out at what time, where, by who, under whose supervision and for what duration. Community leaders need to look at activities to be put in a bushfire calendar. There is need to discuss about various time that different activities need to be carried out.

- Slash-and-burn in farms: Some farmers burn their farms to get rid of vegetation and prepare the farm for planting. This could be in old farms or in newly created farms
- Burning of grazing land to get new vegetation: Every year grazers burn old vegetation in the dry season to get new vegetation or pasture for their animals. The new vegetation that start shooting in dry season gives food for animals and increases when the rains come in March.
- Burning of bushes for hunting: Some hunters burn a portion of vegetation and surround it with dogs and hunting tools to kill any escaping animal.
- Ignorance: Some people just burn vegetation just because they belief that burning vegetation keep the environment neat.
- · Score settling: This occur because of hatred that goes to inflict pain to the opposite party
- · Poor honey harvesting: During honey harvesting some bee farmers use poor methods of honey

harvesting. They do not use bee smokers and therefore fire used to produce needed smoke for honey harvesting is poorly managed and cause bushfire. These bee farmers lack harvesting equipment and training on apiculture •Cigarette smoking: Some cigarette smokers finish smoking and fail to put off fire from cigarette stalk when throwing in the forest or surrounding farm and this results into bushfire.

#### SESSION ON SOLUTION TO BUSHFIRE PREVENTION AND MANAGEMENT

Bushfire can be prevented or managed using creative and innovative ways. There is need for solidarity to reign in forest community to fight bushfire because its impact goes back to every community member. It is also clear that community members must be each other's keeper because solidarity is their own insurance considering that poverty and unemployment reign in the community. Biodiversity conservation and the fight against climate change will never be attained locally if our own sources that create the problem are not solved. Meeting the Sustainable Development Goals and improving on community livelihood will remain a dream if we do not go into action to end bushfires

### COMMUNITY STAKEHOLDERS TO BE INVOLVED IN BUSHFIRE PREVENTION AND MANAGEMENT

Community stakeholders can assist in decision making directly or indirectly by influencing policy on bushfire prevention and management. They can help in sensitization, community engagement and also in handling defaulters. The following authorities are examples that could be identified to form the bushfire prevention and management stakeholder platform:

- The traditional administration represented by Kwifon/Fon
- · Municipal council represented by the Mayor
- Ministry of Forestry and Wildlife (MINFOF)
- Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED) represented by either their Minister, Regional and Divisional Delegates
- The administrative authorities.
- Other elected community members leaders.

#### The following actors were identified to be vehicles for education

- · Forest Honey cooperatives,
- Forest Management Institutions that manages Community Forest in Kilum-Ijim forest
- · Local organisations that work for the community
- Social groups(youth, women, grazers, religious groups and churches)
- Cultural groups like Manjongs, chung, Kikum, etc
- Schools and training centres
- Traditional council
- Water management committee
- · Grazers group,
- · Forest stakeholder platforms
- Traditional Herbalist

# METHODS USED ON BUSHFIRE EDUCATION

Bushfire education could be done through the following ways

- Training workshop
- · Community/local radios and televisions
- Flyers/posters
- · Group sensitization through schools, social and cultural groups
- · Social media through whatsapp, facebook, twitter, linkehn, website, etc
- Arts and crafts through drawing, painting, dancing, singing, sketches, etc
- Books and booklets
- Town crier
- One-on-one approach
- · Learning-by-doing in bushfire prevention and management practices

The stakeholders can also looked at what could engage forest community in bushfire management. These actions can be:

- · Community needed education on the importance of the forest to make them value the forest
- Development of forest friendly activities that improves lives and protect the forest like bee farming
- Protection of forest as water catchment area: When they use the forest daily they watch against bushfire.
- Protection of a heritage (shrines)
- Punishment of defaulters
- Encouraging community members to become active members of forest institutions and groups
- Gender and age inclusiveness.
- The practice of improved grazing techniques by grazers
- The practice of improve farming techniques like agroforestry
- · Fire tracing and back burning around the forest
- The planting of Leuceana and Calliandra in a with band of 7 m around grazing or farm land to act as fire breaks.

During exchange sessions on bushfire participants need to identify the type of equipments and materials that will be useful to them in the fight against bushfire. These materials could involve the following hoes, spades, cutlasses, gallons, rainboats, rakes, buckets, sprayers, and hand gloves.

# Types of Conflicts that result from Bushfires around the Kilum-Ijim forest

Type of conflict	Method of conflict	Proposed solution to conflict
Farmer-grazer conflict,	Sometimes bushfires come as a result of bur- ning vegetation to get new vegetation for ani- mals. This fire may mis- takenly get in to farms and later to the forest. Sometimes the bushfire may come from the farm and then burn ve- getation needed by ani- mals	There is need for mutual understanding among bee farmers and grazers knowing that they are important to each other because the farmer needs animal dung for manure and grazer needs crop stalks after harvesting to feed the animals. It is then important for infor- mation flow to know when to make use of each other's services. There is also need to engage in dialogue to solve conflicts if they occur and promote out of court dispute resolution be- cause it is cheap and less time consuming.
Grazer-bee farmer conflict	This occurs when gra- zers set fire on vegeta- tion to get new pasture for their animals and this result in destruction of forest that host bee farmers beehives	There is need for precaution and patrols by fo- rest users like bee farmers during the dry sea- son to prevent bushfires through education and immediate intervention should it occur. There is need for solidarity among grazers and bee farmers because they make use of the same landscape. There is need to always be ready to dialogue when there is a problem.

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bee farmer-crop far- mer conflict	Most bushfire in forest re- sult from slash-and-burn in farms. The bushfire in forest destroy beehives.	There is need for precaution and patrols by forest users like bee farmers during the dry season to prevent bushfires through education and imme- diate intervention should it occur. There is need for solidarity among crop farmer and bee farmers because they make use of the same landscape. The farmer needs the bees in the fo- rest for pollination of their crops and the bee far- mer needs to crop farmer because their farms serves as additional source of nectar and pollen for honey. There is also need to always be ready to dialogue when there is a problem.
Bee farmer-bee far- mer conflict	Due to poor honey har- vesting, bushfire could occur and consume the forest and beehives of other bee farmers	There is need for precaution and patrols by forest users like bee farmers during the dry season to prevent bushfires through education and imme- diate intervention should it occur.
Bee farmer-Cigarette smoker conflict	Cigarette smokers be- come careless with ciga- rette stalks after smoking and when thrown care- lessly in farms at forest peripheries or forest they cause bushfire in forest that destroy beehives.	There is need for solidarity among bee farmers be- cause they make use of the same forest. There is also need to always be ready to dialogue when there is a problem.
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# WHAT THE LAW SAYS ABOUT BUSHFIRE

Prime Ministerial Decree of No 95/531/PM of 23rd August 1995 determines the condition of implementation of forestry regulations, in its article 3 (9) and (10) bushfire is classified into 2 main groups namely: late and early fires. Late fire is lighted at the heart of the dry season. Early fire is lighted very early at the beginning of the dry season for the purpose of developing grazing areas.

The Forestry Law No 94/01 of 20th January 1994 laid down Forestry, Wildlife and Fisheries Regulations in its General Provision Section 14 forbid the lighting of fire without prior authorisation that may cause damage to vegetation especially late fires.

Prime Ministerial Decree of No 95/531/PM of 23rd August 1995 determine the conditions of implementation of forestry regulations, in its Article 6 (1), (2) and (3) set down conditions on what we are expected to do or not to do relating to the lighting of late fire

Aligna (1): Strictly forbids the lighting of late fire

Aligna (2): Identify the role of the DDFOF/DDEP in collaboration with the Senior Divisional Office to issue orders to lay down conditions for lighting fire

Aligna (3): Point to the service in charge of issue Authorization to set early fire i.e. DDFOF and DDEP Again this same Decree in its Article 6 (4) gives the chance for any person to light early fire in as much as the following conditions are fulfilled by the person

1. That the person remains at the place of the fire until it is completely extinguish

2. That the person takes necessary precautions to ensure that the fire does not spread beyond the land in question

CAMGE	CAMGEW AWARDS		
2020 MIDORI PRIZE AWARD FOR BIODIVERSITY	National Energy Globe Awardfor 2018 AND 2019		
2020 RECYCLING HEROS from Global Recycling Foundation	CAMGEW-HONEYSHOP or NOWEFAM Award by FOMBILLION August 2018		
Gender Just Climate Solutions Award 2019 Spain COP25	.Pan African Prize Award for Cameroon 2012 AND 2013 by Teach A Man To Fish – UK		
UNDP EQUATOR PRIZE AWARD 2019 NEW YORK-USA	Cameroon National Award for Kilum-Ijim Forest Conservation, Poverty Alleviation and Development in Oku, 20 MAY 2014.		
UNIDO Prize Award May 2019 Rome-Italy on Agrofood and Biodiversity	World Bank Recognition 2012 for Work done on Kilum-Ijim Forest Governance		
Guardian Post National Award 2019 Ebolowa-Cameroon			
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