



# FIRE-FREE VILLAGE PROGRAM

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## REVIEW 2017



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**APRIL**

## THE FIRE FREE VILLAGE PROGRAM

Officially launched by APRIL in July 2015, the Fire Free Village Program (FFVP) is a fire prevention project in Riau, Indonesia, founded in close collaboration with local communities, to address the underlying causes of fires through a process of socialisation, education and increased awareness of the negative impacts of burning. The FFVP has worked in partnership with local NGOs, the government, police, military and Riau's Disaster Mitigation Agency. The FFVP is the second stage and cornerstone of a three-stage programme to support communities in developing their social, economic, health, education and environmental capabilities, without using fire as a tool for land clearance and preparation. The three stages are:



1

### Fire Aware Community (FAC):

Preliminary socialisation and engagement before entering the FFVP, focused on relationship building and initiatives such as the school awareness program. Currently, 50 villages across Riau are at this initial stage of engagement.



2

### Fire Free Village Program (FFVP)

Spanning five project areas (see below) over two years, this stage is focused on educating, equipping and supporting villages, initially via the offer of economic rewards and other assistance, to adopt No Burn agricultural practices. Currently, 18 villages are actively participating at this stage in the FFVP.



3

### Fire Resilient Community (FRC)

These are villages, which have 'graduated' from the FFVP and are no longer eligible for rewards, but continue to have ongoing engagement with APRIL (including continued support for local Crew Leaders). For the first time, nine villages have now moved into the FRC stage of engagement.



## Brief Description of the FFVP

APRIL has continued to adapt and improve the five key project areas within the FFVP:



### 1. No Burn Village Rewards

Incentivising villages to abandon traditional agricultural methods that employ fire as a land clearance and preparation tool, by awarding funding to community infrastructure projects for communities that do not burn on land areas within their control.

### 3. Agricultural Assistance

This involves providing help to adopt a range of sustainable agricultural alternatives, including the use of mechanical land clearing tools and No Burn methods, for land management activities. This has also included assistance in the form of education, equipment, funding and labour.



### 2. Village Crew Leader

Recruiting individuals from local communities as APRIL contractors to act as fire prevention advocates and fire suppression specialists at the village level. This role covers fire monitoring, reporting and sharing the knowledge/training provided to them by APRIL.

### 4. Community Fire Awareness

Raising awareness of the dangers of land clearing by fire, and the negative impact on community health. Overlapping with the FAC program, this aims to achieve longer-term socialisation and changes in attitude/behaviour.



## ABOUT CARBON CONSERVATION

Carbon Conservation is a privately held company established in 2007 in Australia, now based in Singapore. Specialising in conservation, sustainability and environmental finance, Carbon Conservation brought the first world reducing emissions from deforestation and forest degradation (REDD) carbon credits to market with an Australian project, as part of the Greenhouse Friendly Scheme, selling carbon credits to global giant Rio Tinto Aluminium. Carbon Conservation is best known for its innovative 50,000ha Ulu Masen Ecosystem Avoided Deforestation Project in Aceh, Indonesia, which won the Carbon Finance Deal of the Year award. It was also the subject of an award-winning documentary, "The Burning Season", narrated by Hugh Jackman, which explained how orangutan conservation and avoiding deforestation could be tied together to generate alternative monetary incentives.

**Reviewer:** Mr Darren Toh is a veteran investigator who has spent over 15 years at the leading edge of regulatory investigations, compliance and monitoring activities in a range of fields, including environment. He has Bachelors degrees in Arts and Law from the University of Melbourne and post-graduate qualifications as an investigator. He has been working with Carbon Conservation to formulate, implement and review environmental projects since its inception.



### 5. Air Quality Monitoring

Installation in 2016 of seven <PM10 detectors, to regularly monitor air quality in the Riau area in and around the APRIL concession areas.

Conceived, initiated and driven by APRIL, the FFVP was developed in response to the devastating annual fire season in the region, which has resulted in significant loss of life, environmental damage and destruction of property, as well as being a threat to the health of communities throughout Indonesia and its neighbouring regions.

### Review by Carbon Conservation



For a third year, Carbon Conservation (CC) has been commissioned by APRIL to undertake an independent review of the FFVP. The purpose of this review is to provide an external evaluation of the Program in 2017, in accordance with APRIL's broader sustainability policy and commitment to transparency for the purposes of reducing the significant risks historically associated with forest burning practices.

This review examines the ongoing progress of the FFVP, particularly each of the five key project areas. The focus is on identifying any areas of strength and weakness, with the provision of an objective analysis and relevant recommendations in line with the overall goal of further adapting and improving the FFVP moving forward. In particular, this report is not intended to rehash previous review reports, but seeks to provide an updated perspective on the FFVP implementation and outcomes to date.

## REVIEW METHODOLOGY

CC has based its independent review on the following:

### 1. Ground-truthing:

A four-day visit including onsite inspections of four villages at various stages of engagement with the FFVP, including visits to community centres, agricultural sites, local markets, schools and reward sites. The villages in Riau visited include Tanjung Padang, Olak, Langgam and Petodaan.

### 2. Qualitative interviews:

Detailed discussions with village heads, teachers, community members, local authorities, other NGOs, religious leaders, the APRIL implementation team (both employees and contractors) and senior management.

### 3. Quantitative assessment of APRIL data:

An inspection of relevant data provided by APRIL for 2017 in relation to the FFVP, including data on the communities engaged, burnt land, air quality, rewards distributed and relevant budget allocations.

# KEY PERFORMANCE INDICATORS

In line with the approach taken in the previous year's review, CC has adopted the following three key performance indicators (KPI) in its review of the five project areas of the FFVP:

## 1. Short-term contribution to the reduction of burnt areas and positive engagement with the communities:

Measuring the ability to engage villages with an immediate cause/effect proposition, focused on how quickly and openly the program has been embraced by the local communities. This KPI looks at the relative contribution of the five different projects to the short-term reduction in the number of burnt areas and engagement with local communities.

## 2. Long-term community cultural shift, socialisation, and fire-free alternative livelihoods:

Measuring the cultural and social changes resulting from the five FFVP projects and the longer-term reduction in fire. This KPI looks at the relative contribution of the five different projects to long-term community cultural shifts, education levels and a clear path to future economic sustainability without the need for burning. This KPI is focused on the extent to which communities recognise the negative long-term economic and health risks of fire and understand that prosperity can be decoupled from burning.

## 3. APRIL's estimated return on investment (ROI):

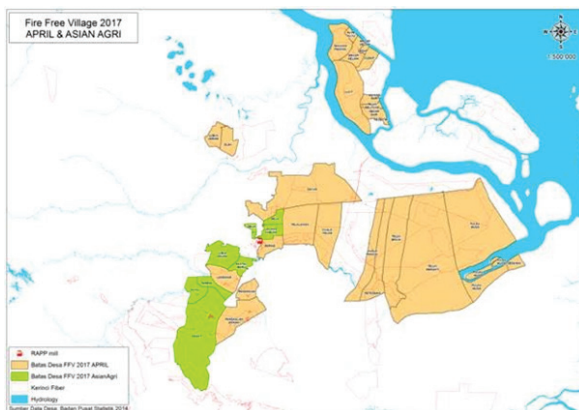
Measuring the related costs of the FFVP in terms of reduced losses from burning, reductions in the budget for suppression of fire, better long-term community engagement and other corporate social responsibility and community development measures. This KPI is focused on providing accountability to APRIL shareholders and investment committees, with a direct correlation to investor, government, NGO and financial goodwill.

We note the limitations resulting from the lack of reliable historical records on the number and extent of fires in previous years, which could be used as a baseline for current findings. To address this, APRIL has provided estimates on historical fires and burnt areas based on best practice, including evidence drawn from burn scar maps, aerial surveys, ground inspections and engagement with local communities.

## BACKGROUND TO THE FFVP

### The FFVP Areas

The APRIL Concession areas in Riau, including the relevant villages engaged with the FFVP, are located in the area map shown below.



The location of villages visited for the purposes of the 2017 review included:

1. Tanjung Padang – Village head: Pak Abu Sufian, population: **1,200+**.
2. Olak – Village head: Pak Amrin, population: **1,060+**.
3. Langgam – Village head: Pak Maitizan, population: **3,800+**.
4. Petodaan – Village head: Pak Azwir, population: **430+**.

# HISTORICAL BACKGROUND

A more detailed overview of the historical background to APRIL's FFVP initiatives has been provided in previous FFVP Reports from 2015-2016. The following is a brief outline of key events relating to APRIL's FFVP activities.

Pre-2014

In 1993 APRIL implemented its first recorded 'no burning' policy for land clearance and developed its Fire Alert Communities operation called the "Masyarakat Peduli Api" (MPA) program supporting the creation of the Forest Fire Brigade called the "Manggala Agni", and the Fire Care Community Groups. Since then, APRIL has trained and equipped at least 400 people in villages near its concession areas through its MPA program.

2014

APRIL launched the innovative Village Incentive Program, covering communities over an area of around 352,146ha of land, as a pilot project testing a reward mechanism as a community engagement tool. To address potential concerns around the one-off reward incentive, funds awarded were directed to shared community assets (e.g. roads, bridges, buildings and other infrastructure). This was done to show village participants an immediate and visible reminder of the benefits of not burning. Following the pilot, the first iteration of the FFVP was developed and launched with a focus on longer-term relationships with communities who were willing to collaborate with APRIL to reduce fires.

2015

In late 2014 and early 2015 APRIL recognised that a longer-term solution was needed to focus efforts on fire prevention. The APRIL Fire Free Project Manual was developed to support fire prevention by looking at its root causes and seeking to address them. Subsequent devastating fires in 2015 throughout Indonesia during the annual 'burning season' resulted in record haze concentrations, drawing significant negative national and international attention due to the devastating environmental and health-related impacts.

The FFVP pilot program was officially launched in Pangkalan Kerinci, covering nine communities across over 427,876ha of land under FFVP Memorandums of Understanding (MOU) with communities. Over the course of the program, a significant reduction in burnt areas was seen from an unaudited estimate of 1,039ha of burnt areas in 2013 to 618ha in 2014, and then down to only 53.6ha in 2015. This represented a reduction of more than 90% in burnt areas.

2016

The successes enjoyed by the FFVP in 2015 and the challenges presented by the concurrent fire seasons led APRIL to expand the FFVP program to cover 18 communities across around 592,080ha of land (an increase of 38%) under new MOUs. The doubling in the number of communities covered saw an overall increase in the area of burnt land from 53.55ha in 2015 to 390.6ha in 2016. However, 88.3% or 344.9ha of this burnt area occurred in Pulau Muda, which is quite remote and where fires (once started) are difficult to contain. On a positive note, this meant that other fires only contributed 11.7%, or 45.67ha, of burnt area, across 18 villages.



## The Jakarta Post

Thursday, Dec 21, 2017 | Video | 26°C | ASEAN 10

NEWS BUSINESS SE ASIA COMMUNITY OPINION JPLUS TRAVEL

ADV • INFORIAL

### Building healthy communities with 'Fire-Free Village Programme'

JP Inforial The Jakarta Post

Jakarta, Indonesia | Tue, April 4, 2017 | 12:00 am



Briefing: PT Riau Andalan Pulp and Paper (RAPP) director Rudi Fajar explains the Fire-Free Village Programme (FFVP) to local government officials during an event to launch the program and incorporate more villages into the program on Jan. 31, 2016. (©/Courtesy of PT Riau Andalan Pulp and Paper)

Continuing media attention in 2017 for the FFVP



## SUMMARY OF KEY FINDINGS IN 2017

### QUANTITATIVE FINDINGS

Based on data provided by APRIL for this review, the following key quantitative findings are noted:

#### INCREASE IN FFVP VILLAGES & MOU AREAS COVERED

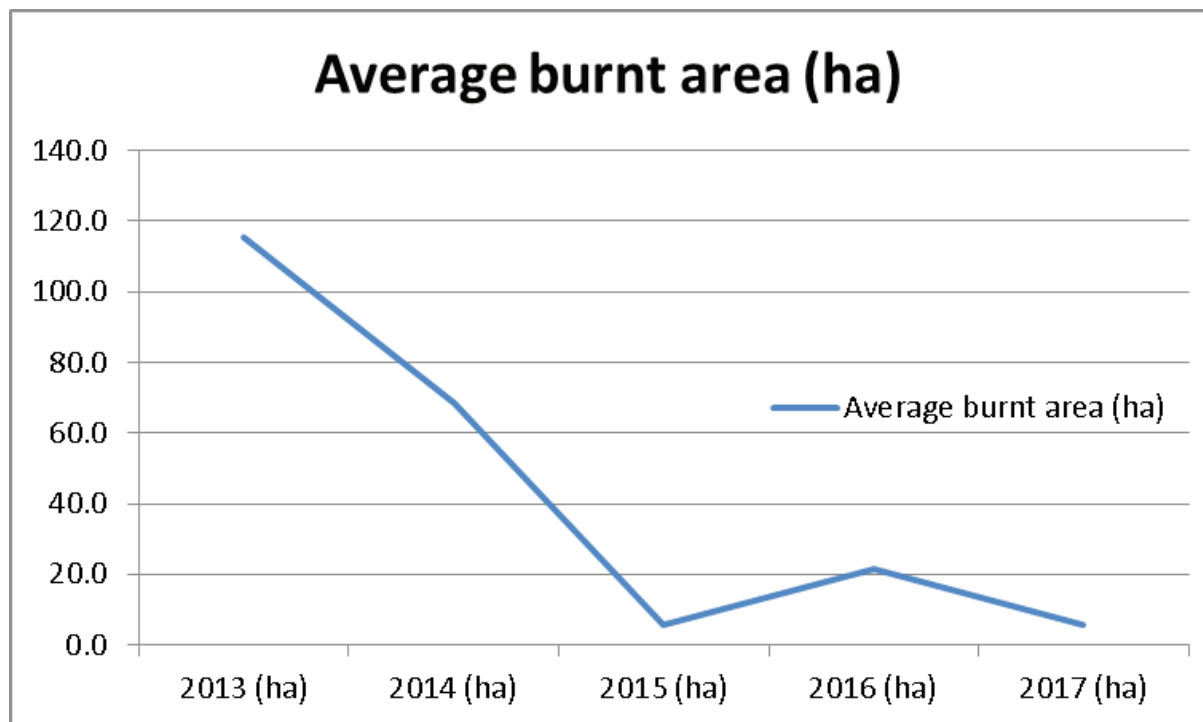
Nine villages in the Riau region were added to the FFVP and nine 'graduated' to the FRC stage, resulting in a total of 27 villages over a total area covering about 622,112ha of land (an increase of 15%). Since 2014, this represents a more than doubling of the area covered by the MOU agreements.

#### REDUCTION IN OVERALL BURNT AREAS

The area of burnt land saw a decrease from 390.6 in 2016 to 159.3ha this year, representing a reduction of 42.6% in 2017. It is noted that the two areas that contributed the most to fires in 2017 (Lukit and Pulau Muda) were in remote areas, largely outside the control of the relevant village populations, where fires (once started) are difficult to contain. Importantly, this meant that the other fires only contributed 3%, or five ha, of burnt area, across the 25 villages in the program.

#### SIGNIFICANT REDUCTION OF TOTAL BURNT AREA SINCE 2014

Significant improvements have been recorded since the 2014 commencement of the FFVP, with 159ha of total burnt land over an area of 622,112ha recorded in 2017 compared to 618ha of total burnt land over an area of 352,146ha in 2014. This represents an overall reduction of 97% in burnt land since 2014.



VILLAGE	PERIOD				
	2013 (ha)	2014 (ha)	2015 (ha)	2016 (ha)	2017 (ha)
Average burnt area (ha)	115.4	68.7	6.0	21.7	5.9

## INCREASE IN FULL REWARDS & DECREASE IN NO REWARDS

In 2017, there was a significantly larger number of villages receiving Full Rewards. Of the 18 villages eligible for rewards (i.e. communities at FFVP year one and two), 15 villages received Full Rewards (indicating no fires on their MOU areas) and one village received a Half Reward (indicating total burnt land of under 2ha). Comparisons to previous years are shown in the Table below.

Year	Total No. Of Villages Eligible For Rewards	Full Rewards Achieved	Half Rewards Achieved	No Rewards
2015	9	3	3	3
2016	18	9	4	5
2017	18	15	1	2

A detailed Table on burnt areas for each relevant MOU area for 2013 to 2017 is provided below.

## HIGH-LEVEL QUALITATIVE FINDINGS ON FFVP OVERALL

Based on interviews with APRIL FFVP engagement staff and participants (including village leadership, teachers, religious leaders, local police and community members), the following key findings were noted:

### VARIED KPI RESULTS

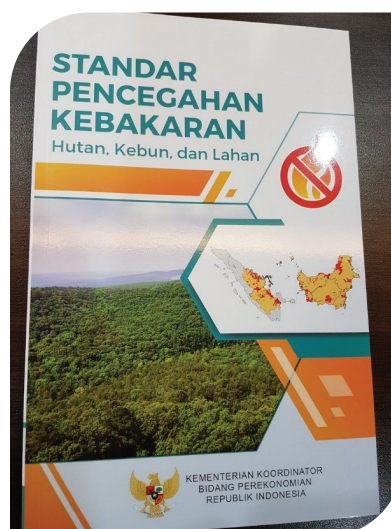
The KPI results for each of the five key components of the FFVP varied by area. This reflects the ongoing evolution of the FFVP as it is refined and improved over time, based on ongoing analysis of yearly results. Further, the FFVP is going into only its third year of implementation and longer-term results are not yet available. Of particular note is the move of nine villages to the FRC stage in 2017, with no rewards offered for compliance with No Burn policies. Additionally, it is notable that 2016 and 2017 have not seen the same high fire risk conditions seen in immediately preceding years, which directly correlate to massive areas of land burnt.

In particular, observations support the following overall findings (addressed in more detail at each Project Review section of this Report):

- FFVP Rewards Project:**  
HIGH IMPACT - Strong positive overall short-term, long-term and ROI results.
- Crew Leaders Project:**  
MEDIUM to HIGH IMPACT - Strong positive overall short-term and ROI results, but yet to be determined long-term results.
- Agricultural Assistance Project:**  
MEDIUM to LOW IMPACT - Some promising short-term results and ROI, but yet to be determined long-term results.
- Community Awareness Project:**  
HIGH IMPACT - Significant positive overall short-term, long-term and ROI results.
- Air Quality Monitoring Project:**  
LOW IMPACT - Potential for assistance in identifying future risks and analysis of historical patterns, but no significant overall short-term, long-term or ROI results.

### BROADER ACCEPTANCE OF APRIL'S FFVP METHODOLOGY

It is noteworthy that the Fire Free Alliance (FFA), which APRIL took a leading role in initiating in 2016, has adopted a "Fire Free Village - Program Toolkit" (the Toolkit), authored by Craig Tribolet, APRIL's Strategic Fire & Protection Manager. The Toolkit is based on APRIL's efforts with the FFVP to date and seeks to provide a high-level guide to the structuring and implementation of fire prevention efforts by plantation-related companies at the local village level. It is also noteworthy that the APRIL methodology (as outlined in the Toolkit) has been adopted in an Indonesian Government guideline booklet on fire prevention entitled "**Standar Pencegahan Kebakaran - Hutan, Kebun & Lahan**", which was published in 2017. This reflects a wider acknowledgement of the successes achieved to date under the FFVP-developed model for fire prevention.



Indonesian Government publication on fire prevention engagement adopting APRIL FFVP principles and tool-kit.





## CRITICAL ROLE OF APRIL ENGAGEMENT STAFF & PARTNERSHIP WITH LOCAL NGOS

APRIL employees play a vital role in coordinating and continuing to engage with local leaders and their respective communities. In particular, the critical management and coordination roles played by both Fire Prevention Manager Sailal Arimi and Strategic Fire & Protection Manager Craig Tribolet cannot be overstated. Successful implementation and consolidation efforts to date are in large part due to their ability to very effectively navigate local cultural sensitivities and nuances. In the context of communities with relatively low levels of education, the importance of relationships and levels of trust established by these staff is critically important.

Crew leaders contracted to APRIL and drawn from the local communities also play a key role in sharing knowledge obtained through APRIL training, monitoring local fire conditions, and collaborating closely with fellow locals. The readier acceptance of these already embedded crew leaders as trustworthy individuals is a key strength for effective implementation.

Both staff and contracted crew leaders provide a vital ongoing link to communities that may otherwise be wary of dealing with large companies such as APRIL. Additionally, it is important to note that APRIL also regularly partners with dedicated local NGOs working in the Riau Province. These NGOs have included Rumah Pohon, Bluegreen, Laskar Alam (see Appendix 1). This practice of working alongside credible NGOs such as these greatly assists in developing deeper levels of trust and relationships that facilitate more meaningful collaboration with local communities.



APRIL's Strategic Fire & Protection Manager Craig Tribolet is a key driver in the management and coordination of the FFVP.



APRIL's Fire Prevention Manager Sailal Arimi plays a vital role for local community engagement.

## PERVASIVE ATTITUDE THAT ONGOING SUPPORT IS NEEDED POST-FFVP

Without exception, all community leaders expressed the need for ongoing support and continued efforts to prevent a return to historical methods of land clearing and preparation by burning. Although varied by specific community, the key areas identified as needing further support included the following:

- Further reward incentives directed at enhancing community infrastructure
- Further land clearance assistance due to a lack of local funds and/or labour to do so independently
- Assistance in developing sustainable agricultural skills and methods to replace traditional fire-based methods
- Continued availability of local crew leaders to lead and support No Burn efforts, particularly in monitoring and providing knowledge derived from APRIL-supported training
- Assistance in developing wider markets and trade for local produce.

Greater investment could be made to foster and support a more effective entrepreneurial approach to self-sufficiency that was observed to be lacking overall.

## SUCCESS OF FFVP REWARDS, CREW LEADERS AND COMMUNITY AWARENESS PROJECTS

The FFVP various projects have evolved and been refined and improved over time to address implementation challenges as they were identified. The quantitative and qualitative results to date reflect significant success in terms of short-term impact and ROI enjoyed by the FFVP.

In particular, each of the FFVP Rewards, Crew Leader and Community Awareness Projects have had a powerful positive impact on the participating communities. The successes here will provide persuasive case studies for future communities throughout Riau and Indonesia.

However, sufficient time has not elapsed to properly gauge the level of success over the longer term. With villages graduating from the program's final FRC stage for the first time in 2017, it remains to be seen whether the socialization, education and assistance provided will result in lasting long-term changes in mindset and practice.

This should not detract from the very considerable positive gains achieved in terms of burnt land reduction and cultural shifts among local populations.

## AREAS FOR IMPROVEMENT

In contrast to the above, overall results in the FFVP Agricultural Assistance and Air Quality Monitoring projects have been disappointing. Each project has significant potential for future positive impact, but this has yet to be seen on a meaningful scale and scope. The vital importance of Agricultural Assistance in transitioning communities into sustainable income-generating farming practices has not yet been fully realised. Air quality monitoring has likewise not yet made a meaningful impact on the behaviour of villages, mainly since results are currently not shared with local stakeholders.

## BURNT AREA OVERALL DATA FROM 2013 TO 2017

	Kapupaten	Desa	FRC/ FFV	Total MOU Area (ha)	Burnt Area (ha)					
						2013	2014	2015	2016	2017
1	Pelalawan	Pelelawan	FRC	21,214		7	15	0.5	1.7	-
2		Sering	FRC	12,742		50	30	11	-	-
3		Kuala Tolam	FRC	29,149		100	30	0.2	0.8	-
4		Teluk Meranti	FRC	159,286		200	83	21.2	-	-
5		Teluk Binjai	FRC	67,771		70	30	0.7	-	-
6		Petodaan	FRC	5,809		15	10	-	-	-
7		Kuala Penduk	FRC	16,321		122	87	-	-	-
8		Pulau Muda	FRC	112,347		175	83	20	344.9	58
9		Segamai	FRC	3,237		300	250	-	10.6	-
10		Langgam	FFV2	7,561		10	7	4	1.8	-
11		Penarikan	FFV2	12,158		70	20	25	-	0.5
12		Pkl.Gondai	FFV2	36,918		500	700	1,500	0.3	4.5
13	Kep. Meranti	Tasik Putri Puyuh	FFV2	1,992		10	60	-	-	-
14		Tanjung Padang	FFV2	8,418		-	1,000	500	-	-
15		Lukit	FFV2	15,656		-	800	7	5	96
16	Siak	Olak	FFV2	9,526		151	50	15	-	-
17		Lubuk Jering	FFV2	7,685		8	4.5	2	0.5	-
18		Dayun	FFV1	64,290		210	235	165	25	-
19	Kep. Meranti	Dedap	FFV1	1,444		-	50	-	-	-
20		Kudap	FFV1	6,623		-	-	-	-	-
21		Mekar Delima	FFV1	8,941		-	-	100	30	-

22		Bagan Melibur	FFV1	3,475	300	200	50	100	-
23		Mekar Sari	FFV1	5,869	-	60	60	30	-
24		Mayang Sari	FFV1	603	-	37	5	-	-
25		Teluk Belitung	FFV1	2,236	-	700	300	-	-
26		Pelantai	FFV1	842	-	50	300	-	-
27		Bumi Asri	FFV1		-	-	-	-	
		TOTAL BURNT AREA			1,039	618	54	391	159
		TOTAL MOU AREA 2014		352,146					
		TOTAL MOU AREA 2015		427,876					
		TOTAL MOU AREA 2016		592,080					
		TOTAL MOU AREA 2017		633,112					
		TOTAL % REDUCTION FROM 2014 COMMENCEMENT OF FFVP			-	Village	91%	37%	74%

*Fire Free Village Year 2 (FFV2).  
Fire Free Village Year 1 (FFV1).*

## REVIEW OF PROJECT 1 – NO BURN VILLAGE REWARDS

Under Project 1, Full Rewards (IDR 100 mil (USD \$8,333 )) were awarded to villages showing no fires on their MOU areas and Half Rewards (IDR 50 mil (USD \$4,166)) were awarded to villages showing total burnt land of under 2ha in their MOU areas. Only villages in the FFVP year one and two stages were eligible for rewards, with rewards no longer available for villages ‘graduating’ to the FRC stage in 2017.



*Fire Prevention Manager Sailal Arimi awarding a full No Burn Village Reward for 2017 to Langgam village head Pak Maitizan.*



## NO BURN VILLAGE REWARD & BUDGET

**BUDGET:** IDR 1.8 bil (USD \$150,000) is available for maximum rewards.

**ACTUAL:** IDR 1.15 bil (USD \$95,833) is to be paid for rewards in 2017.

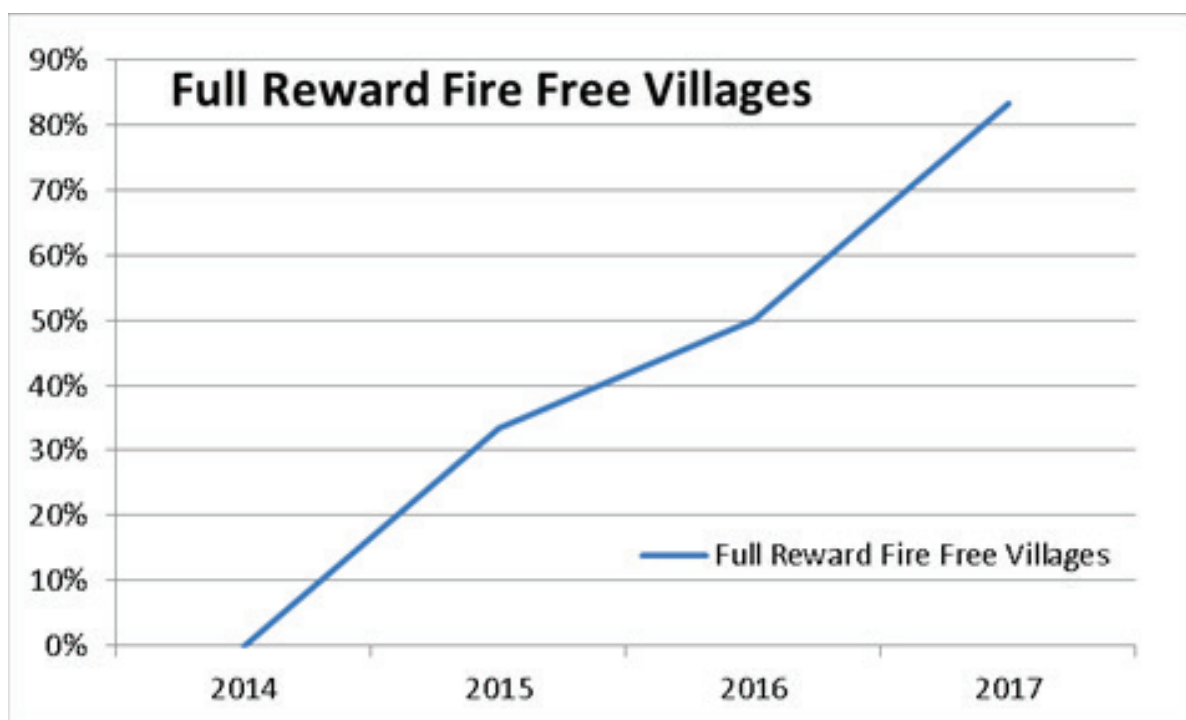
Period	Kabupaten	No	IDR 100,000,000	IDR 50,000,000	No Reward
2017	Pelalawan	1	Langgam	Penarikan	Gondai
	Siak	1	Lubuk Jering		
		2	Olak		
		3	Dayun		
	Kep. Meranti	1	Tanjung Padang		Lukit
		2	Putri Puyu		
		3	Dedap		
		4	Kudap		
		5	Mekar Delima		
		6	Bagan Melibur		
		7	Mekar Sari		
		8	Mayang Sari		
		9	Teluk Belitung		
		10	Pelantai		
		11	Bumi Asri		

In 2017, there were more FFVP villages receiving Full Rewards (15 indicating no fires on their MOU areas) than in any preceding year. Accordingly, a greater sum of eligible rewards was made available to FFVP villages. One village was also eligible for a Half Reward. Comparisons to previous years indicate a clear upward trend, as a greater number of villages become eligible for Full Rewards over time, as shown in the Table below.

YEAR	TOTAL NO. OF VILLAGES ELIGIBLE FOR REWARDS	FULL REWARDS (IDR 100 mil)	HALF REWARDS (IDR 50 mil)	NO REWARDS	TOTAL AVAILABLE REWARD FUNDS	TOTAL ELIGIBLE REWARDS DISTRIBUTED
2015	9	3	3	3	IDR 900 mil USD \$75,000	IDR 450 mil USD \$37,500
2016	18	9	4	5	IDR 1.8 bil USD \$150,000	IDR 1.1 bil USD \$91,666
2017	18	15	1	2	IDR 1.8 bil USD \$150,000	IDR 1.55 bil USD \$129,166

Since 2014, APRIL has scaled the number of villages from 9 to 27 (18 in the FFVP), doubling the potential No Burn reward payout and more than doubling the defendable MOU land area from 352,146ha in 2014 to 681,767ha in 2017. It is worth noting that largely the same APRIL staff capacity was available to coordinate and implement the project. The table below outlines the percentage change in budget (actual) from previous years, which was primarily based on more rewards being distributed.

	Budget	Change from previous year (%)
2015 Budget (Actual)	USD \$37,500	-
2016 Budget (Actual)	USD \$97,917	+ 161%
2017 Budget	USD \$115,000	+ 17%



Full Reward Fire Free Villages	2014	2015	2016	2017
	9	9	18	18
	0	3	9	15
	0%	33%	50%	83%

## OBSERVATIONS ON NO BURN VILLAGE REWARD

### Rewards as a 'Hook':

Rewards have proven an extremely effective 'conversation starter' mechanism for the FFVP to facilitate initial engagement with communities. For later stage FFVP communities that achieve reward statuses, the highly-visible provision of new infrastructure benefiting the entire community is a powerful mechanism to encourage continued cooperation.

## NOTABLE RESULTS FOR 2017

FFVP No Burn Rewards have trended consistently upward, with 33% in 2015, up to 50% in 2016, and now 83% in 2017. In line with expectations of greater success based on improvements to the FFVP and more deeply embedded socialisation, success rates in first and second year FFVP villages were higher, compared to first and second year villages in 2016.

There were no FRC villages in 2016 to compare with 2017. However, the results for FRC villages show that they have had a significant decrease in burnt areas from when they were second year villages in 2016, although this may be attributed largely to the outlying Pulau Muda, now an FRC village, with 344.9ha burnt in 2016.



A newly constructed bridge for Tanjung Padang funded by a No Burn Village Reward.



The bridge used prior to the rewards bridge built in Tanjung Padang.

**Carrot and stick approach:**

It is clear that the harsh penalties for illegal burning operate as a powerful overall deterrent. Messaging on penalties from the Indonesian authorities appears to be clear, ongoing and widely understood. In all villages visited, FRC communities in particular, respondents indicated that these penalties would operate to deter illegal burning practices in the absence of further rewards. However, it is unlikely that any individual would openly admit that burning would recommence upon the withdrawal of rewards.



Local Indonesian government warning of the harsh penalties for illegal burning.



Local policeman Pak Handayanto Simanjuntak working alongside Petodaan village head Pak Azwir and APRIL FFVP coordinator Pak Nanang to monitor compliance with No Burn policies.

**Validation to support village leadership:**

There was a clear political benefit for village leadership where rewards were distributed, incentivising leaders to encourage their communities to maintain engagement with the FFVP and No Burn policies. However, the reviewer did not have an opportunity to interact with any villages that received no reward in 2017 or any previous years. It is therefore unclear to what extent leaders in those communities suffered negative political impact or would be willing to maintain No Burn policies once they leave the FFVP.

**Expectation of further rewards:**

A general expectation of further rewards was evident from interviews. Villages that were visited consistently expressed the view that rewards were essential for building up (or completing already commenced) community infrastructure.

**Socialisation implemented regardless of reward incentives:**

As observed in previous years, education and socialisation efforts cannot be unlearned, once successfully rolled out in FFVP communities. Although triggered by rewards, it is likely that these learnings will remain embedded within villages that have moved through the FFVP. However, it remains to be seen whether communities will behave in accordance with the learnings in response to future economic pressures.



**Recommendations :**

**1. Ongoing monitoring of post-FFVP villages:**

Continued monitoring of MOU areas that have completed the FFVP will be essential to evaluate the extent to which socialisation/education efforts (in the absence of continuing rewards or economic support), combined with other external factors (e.g. penalties under law), have been successful in affecting a long-term change in attitude and behaviour. In particular, future results for FRC villages should be closely monitored. Liaison with NGOs may assist in this monitoring and analysis.

**2. Continued engagement with post-FFVP villages:**

Continued engagement with communities that graduate from FFVP should be maintained to ensure relationship continuity. This will allow APRIL to more quickly and effectively receive and disseminate information about any future severe fire risk periods.

**3. Analysis of results to date:**

An evaluation of how reward funds have been used should be conducted to determine whether they have made any meaningful impact on the relevant

communities (e.g. structures built, actual usage of structures by communities, number of fully completed structures, etc).

**4. Facilitate communication between FFVP villages:**

APRIL should consider facilitating the ongoing sharing of knowledge and experiences among current and graduating villages. The provision of devices to village heads to allow open communication between communities (such as those provided to Crew Leaders) may be considered. WhatsApp groups, such as those used to coordinate Crew Leaders, may also be useful. This continued communication may also be an opportunity for villages to increase trade and commerce.

**5. Feedback from a cross-section of communities:**

In previous years, questionnaires deployed by APRIL were used to gauge awareness and comprehension. While the results of such questionnaires may be of questionable value, some effort should be made to connect with a broad cross-section of the relevant communities to ensure socialisation is being achieved beyond the village leadership.

## KPI ANALYSIS OF PROJECT 1 – EXECUTION AND IMPACT OF NO BURN REWARDS

KPI	IMPACT	EXECUTION
Short term contribution to the reduction of burnt areas and positive engagement with the communities	HIGH	Short term impact of rewards remained high for all FFVP villages as a key initial engagement device and economic incentive to not burn, allowing deeper engagement by APRIL to address underlying causes of fire in those communities. The improved burnt area results indicate that the FFVP was very successful in changing attitudes and behaviour in the short term.
Long term community cultural shift, socialization, and fire-free alternative livelihoods	MEDIUM	Based on improved results from previous years, there appears to be a continued momentum and commitment to No Burn practices, especially in FRC villages that showed strong results in 2017 despite the absence of any reward incentive. A number of unfinished structures were observed, which provided a political tool for village leaders to engage their community in a common pursuit of further prizes to complete those structures.
APRIL's estimated ROI	HIGH	Although the budget for rewards has almost tripled from USD \$37,500 in 2014 to USD \$115,000 in 2017, there has been a corresponding significant improvement in No Burn results over time. The reduction from 4,591.5ha in 2014 to 159ha in 2017 is an extraordinary success and brings significant ROI to APRIL. Additionally, APRIL's potential ROI from the engagement, awareness, press coverage and word of mouth to drive prevention from this initiative is also likely to be very high. This is especially so, given the wider adoption of the APRIL FFVP model by the Indonesian Government, and other corporates and organisations.
<b>OVERALL</b>		<b>HIGH IMPACT</b>

## REVIEW OF PROJECT 2 – CREW LEADERS



Langgam Crew Leader Pak Iksan and local coordinator Pak Nanang in their distinctive FFVP uniforms.

Villages at the FFVP and FRC stages are provided with Crew Leaders, operating as paid APRIL contractors, drawn directly from the local communities. These Crew Leaders are responsible for conducting patrols to monitor local conditions, assisting locals using the fire prevention skills provided by APRIL, acting as a contact point between APRIL and the villages, and providing a constant and highly visible reminder of No Burn policies.

Crew Leaders all receive training with local police in fire suppression and other skills to support their work within their communities. They are also provided with material assistance in the form of smartphone devices for communication and assistance with transport. Using smartphones (typically on the WhatsApp application, which allows messaging and photo sharing), the Crew Leaders communicate regularly with each other and APRIL staff to share information and knowledge, and coordinate and report daily on local conditions and activities.

## CREW LEADER BUDGET

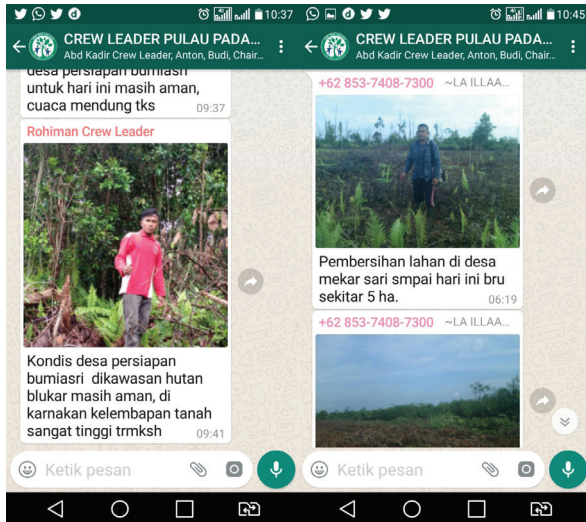
**BUDGET:** IDR 993,600,000 (USD \$82,800) for all Crew Leader costs including costs for assistance with transport, uniforms, communications devices, and wages.

The increase in Crew Leaders from nine in 2015 to 27 in 2017 raised the challenge of scaling overall management, and over a significantly larger area. Building on systems established in 2015, the coordination of the Crew Leaders appears to be generally well executed. With only two instances of poorly performing Crew Leaders needing to be replaced during the FFVP, the existing framework for training and deployment appears effective. Of particular note is WhatsApp app used as a channel for: daily reporting from each area (including photos to show activity), knowledge and experience sharing, and quick dissemination of information from FFVP manager to Crew Leaders in the field.

	Budget	Change from previous year (%)
2015 Budget (Actual)	USD \$32,167	First year only
2016 Budget (Actual)	USD \$78,837 USD \$4,300 per Crew Leader	+ 145%
2017 Budget – FFVP villages only	USD \$82,800 USD \$4,600 per Crew Leader	+ 5%
2017 Budget – FRC villages only	USD \$52,500 USD \$5,833 per Crew Leader	First year only
2017 Budget – FFVP and FRC villages combined	USD \$135,300 USD \$5000 per Crew Leader	+ 72%

## NOTABLE RESULTS 2017

The increase in Crew Leaders from nine in 2015 to 27 in 2017 raised the challenge of scaling overall management, including over a significantly larger area. Building on systems established in 2015, coordination of the Crew Leaders appears to be generally well executed. With only two instances of poorly performing Crew Leaders needing to be replaced during the FFVP, the existing framework for training and deployment appears effective. Of particular note is the WhatsApp smartphone app utilized as a channel for: daily reporting from each area (including photos to show activity), knowledge and experience sharing, and quick dissemination of information from FFVP manager to Crew Leaders in the field.



The highly effective Crew Leader WhatsApp mobile app communication group including all 27 contractors, coordinated by Fire Prevention Manager Sailal Arimi.

Village leaders consistently emphasised the importance and utility of the Crew Leaders in continued socialisation, the monitoring of local conditions and fire prevention efforts. The Crew Leaders also provide critical local knowledge, social validation and serve as communication access points within their respective communities. This element of APRIL engagement with local communities has continued to show strong positive results, as reflected by how valued these leaders appear to be in their respective communities. Consistently improved burnt area results and compliance levels with No Burn policies in FFVP villages also reflect the effectiveness of Crew Leaders as FFVP's frontline advocates for local implementation.

## OBSERVATIONS ON CREW LEADERS

### Active and regular communication:

As in 2016, effective and constant communication within the Crew Leader network continues to be a strong mechanism for ongoing coordination, learning and accountability. The body and breadth of experience within the network has grown significantly since 2014, with 'veteran' Crew Leaders able to share practical knowledge with their newer colleagues. It is expected that this depth of experience and knowledge will continue to grow over time, further embedding socialisation efforts.

### Crew Leaders as symbols of the No Burn fight:

As active and highly visible advocates for No Burn policies and practices, Crew Leaders become critical role models within their respective communities. Being proactive to share knowledge and patrol for fire risks is vital to meaningful field implementation. Members drawn from the local population have a direct influence on their fellow villagers. Media attention around the FFVP and Crew Leaders illustrate the powerful symbolic value that on-the-ground personnel like Crew Leaders contribute to broader adoption.



Local FFVP Crew Leaders and APRIL recognised in national Indonesian media for fire prevention efforts.

### Selection of Crew Leaders:

With low turnover since 2015, it appears that existing process and selection criteria (e.g. communication skills, access to leadership, and attitudes to the position) are effective. The practice of having at least three applicants from each community also mitigates concerns around nepotism or otherwise inappropriate candidacy. Although Crew Leaders are typically closely aligned with local leaders, this serves as a positive factor in terms of influence and access.

### Supervision by Fire Prevention Manager Sailal Arimi:

Sailal serves a critical coordination role for the Crew Leaders. His strong local network and links to the community, interpersonal skills and in-depth grasp of the FFVP principles and practices are critical to the success of this project. While also serving a broader management role, his efforts to coordinate, train and motivate the growing network of Crew Leaders are crucial.





*Fire Prevention Manager Sailal Arimi actively trains and coordinates local Crew Leaders in fire prevention methodology.*

#### **Strong reliance on Crew Leaders:**

In all cases, it was clear that FFVP and FRC communities relied heavily on Crew Leaders to successfully implement and maintain No Burn policies. Leaders uniformly stated that they did not have local capacity nor available funding to support Crew Leaders without FFVP support. This reflects a continual heavy reliance on Crew Leaders, the consequence of which has not yet been tested, since no village has yet moved beyond the FRC stage.

#### **Quote – Pak Abu Sufian Village Head of Tanjung Padang:**

*“We don’t have people to do patrols and work with locals for fire prevention without the Crew Leader supported by APRIL...he’s essential for our work to prevent accidents and deliberate burning”.*

#### **Recommendations :**

##### **1. Continue Crew Leader presence post-FFVP:**

Given the critical importance of Crew Leaders to the No Burn efforts promoted under the FFVP, APRIL should consider extending the duration of support for these positions. Given that establishment costs (e.g. transport, communication and training expenses) are already largely implemented, the cost of maintaining wage support is significantly reduced. While it is clear that Crew Leaders are sharing their training and knowledge, their incentive to continue doing so without wage support may be absent. At a minimum, continued connection of Crew Leaders graduating from the FFVP and FRC should be maintained (e.g. an alumni network).

##### **2. Ongoing monitoring of graduated villages:**

Whether the investment already made to train and upskill Crew Leaders suffices in ensuring a continued positive contribution to No Burn efforts remains to be seen, and this needs to be monitored as FRC villages graduate and no longer receive continuing wage support. Absent this support, 2018 will be a critical year for evaluating whether sunk investment provides a longer-term positive impact.

##### **3. Contingency for management changes:**

Relationships developed and maintained by these individuals, combined with their strong leadership and interpersonal skills, is currently vital to the continued success of the FFVP. APRIL should provide support for the existing management team to train and prepare other potential leaders, ensuring a greater delegation of responsibility to future managers.

##### **4. Additional Crew Leaders for larger and more remote areas:**

As previously recommended, supplementary Crew Leaders should be considered for very high-risk fire hotspots and MOU areas that are significantly larger or include more remote locations. These can be on a full- or part-time basis, depending on the local needs. Areas such as Pulau Muda, that suffer more severe fires due to their particular geographic characteristics, are prime examples of locations that may greatly benefit from having additional Crew Leaders.



## KPI ANALYSIS OF PROJECT 2 – EXECUTION AND IMPACT OF CREW LEADERS

KPI	IMPACT	EXECUTION
Short term contribution to the reduction of burnt areas and positive engagement with the communities	HIGH	Crew Leaders have shown themselves to be highly effective local advocates for the FFVP. The constant and highly visible reinforcement of No Burn policies and practices has strong and immediate positive impact on implementation. They have continued to develop into a growing body of experienced, influential and proactive agents for the FFVP within their communities.
Long term community cultural shift, socialization, and fire free alternative livelihoods	MEDIUM	It is clear among the communities visited that the role and purpose of Crew Leaders is well understood and accepted. However, it remains unclear the extent to which Crew Leaders are able to influence long term cultural mindsets. Their constant presence and efforts to reinforce FFVP messaging and socialisation efforts are currently underpinned by their wage reliance on APRIL.
APRIL's estimated ROI	HIGH	In 2017, USD \$135,000 was distributed across 27 Crew Leaders in as many villages (USD \$5,000 per Crew Leader), up 172% from USD \$78,837 for 18 Crew Leaders in 2016 (USD \$4,300 per Crew Leader). This is a very high ROI given the significant impact they appear to have on the behaviour of their fellow villagers and the quick contact access points they provide to APRIL.
<b>OVERALL</b>	<b>MEDIUM TO HIGH</b>	

### REVIEW OF PROJECT 3 – AGRICULTURAL ASSISTANCE

**Historically**, burning has been used as the fastest and cheapest means of clearing land. There has therefore been a direct link between fires and income generation for communities reliant on agriculture. Accordingly, the FFVP Agricultural Assistance Project was developed and continues to operate in line with the proposition that providing viable alternative and sustainable agricultural practices is essential to continuing No Burn efforts. Assistance has included: labour and funding to prepare land, supply of machinery and equipment, and education in sustainable farming practices.



*Rich local produce from villages in the Riau region.*

Much thought has been put into ensuring Agricultural Assistance empowers communities to change historical practices rather than creating a paternalistic culture of reliance on handouts. Providing FFVP villages with the ability to become self-reliant and flourish economically without becoming dependent on continuing external support is therefore the primary goal.

## AGRICULTURAL ASSISTANCE BUDGET

**BUDGET:** IDR 891,000,000 (USD \$74,250) for all costs, including:

excavators, mobilisation, hand tools, fertilisers and herbicides, and workshops.

In 2017, the total number of FFVP villages receiving agricultural assistance has remained fixed at 18. However, the overall budget for this project has significantly reduced from previous years, as shown in the Table below:

	Budget	Change from previous year (%)
2015 Budget (Actual)	USD \$107,241	-
2016 Budget (Actual)	USD \$129,453	+ 21%
2017 Budget – FFVP and FRC villages combined	USD \$74,250	- 42%

## NOTABLE RESULTS FOR 2017

APRIL staff indicated that agricultural assistance is pivotal to the long-term success of the FFVP and all fire prevention efforts. Sailal Arimi summarised this view by explaining that “Rewards are the hook, but agriculture is the key.” Unfortunately, as observed in previous years, this appears to be less effective than hoped, with continued slow progress and low impact for long-term change. A range of challenges were faced in this project, including:

### Legal ownership of land:

Determining the ownership of MOU land has been consistently problematic, creating delays and uncertainty while confirmation is required from the three relevant levels of government. This has hampered land preparation assistance, with issues including: multiple claims of ownership, overlapping concessions, and some restrictions on land clearing in particular areas.

### Appropriate tools and land clearing methods:

Previous issues with inappropriate equipment appear to have persisted. Although smaller-scale and more appropriate equipment (e.g. grass cutters for land clearing and preparation) will be distributed to various areas, delays to date have hindered greater progress for many villages.



*Hand-cutting Machines for land preparation donated by APRIL to local FFVP villages.*



**Basic economics:**

Fire remains the cheapest and easiest way to clear land. Small but significant pockets of villagers also continue to believe that fire is the most productive way to prepare land for planting. While many inroads via socialisation and education have been made, the basic economics of some areas dictate that available alternative land clearance methods remain too expensive.

**Traditional practice:**

Some village heads estimate that up to 20% of their communities continue to believe fire provides more fertile land for planting. In the absence of successful crops using alternative methods, purely theoretical socialisation is unlikely to be sufficient in converting these remaining pockets of resistance.

Areas such as Tanjung Padang were notable examples of success, with locals reporting that recent pineapple crops planted using sustainable methods produced better quality harvests with up to 20% greater volumes. It is hoped that such success stories will spread and effect longer-term changes in surrounding areas.

**QUOTE: Abu Sufian, Village Head of Tanjung Padang:**

*With land preparation methods taught to us and supported by APRIL we've had sweeter fruit and bigger crops for market".*



*Pineapple crops planted in Tanjung Padang with APRIL assistance using sustainable land preparation methods.*

However, in other areas, it appears the fear of punishment was the key deterrent rather than the provision of sustainable alternatives. None of the villages interviewed could provide a satisfactory alternative to fire, should all land clearing assistance cease, but merely reiterated that they would not risk severe penalties.

**OBSERVATIONS ON AGRICULTURAL ASSISTANCE**

Continuing support needed: Respondent villagers uniformly indicated that continuing assistance with alternative land clearance is needed. In many cases, land that could not be cleared using fire was simply left idle. Petodaan was a prime example of this, due to the need to regularly leave land fallow and clear new areas for rice crops. Difficult terrain in Petodaan and Langgam (and likely a number of other locations) compounded this issue.

**QUOTE – Pak Azwir, Village Head of Patodaan:**

*"We need more support from APRIL to learn best practice in land preparation...we don't yet have the skills and equipment we need to do it manually"*

Attitude of dependency: In the absence of APRIL support, all respondents indicated that they would seek support from other NGOs and the Indonesian government. It is noted that despite clear messaging from APRIL staff that FFVP support is limited, none appear to have achieved an attitude of self-sufficiency.



*Land prepared manually for planting of local crops with APRIL assistance at Langgam and Tanjung Padang.*

**Recommendations :**

**1. Coordination with Community Development:**

FFVP graduating villages should be engaged by APRIL Community Development to continue with the learning and implementing of alternative sustainable agricultural methods. There is a clear opportunity for more effective collaboration between teams under a whole-of-company approach to provide constructive ongoing support. The current focus on providing land preparation assistance can therefore be linked to other activities currently conducted by Community Development, such as seeding and planting.

**2. Communicate more successful case studies:**

There is significant value in creating successful case studies of graduating communities to help recruit future villages. Such case studies will validate the FFVP methodology and framework by demonstrating that its approach leads to the development of communities that in practice can successfully maintain long-term economic viability and sustainable agricultural practices. APRIL may consider bringing leaders from communities with successful pilot crops to speak with and assist other villages.

**3. Clear legal ownership and land use maps:**

Transparent maps of all MOU areas showing land use restrictions and clearly-defined ownership lines are needed to overcome the continued delays and uncertainty hindering land clearing assistance efforts. These may need to be formalised over time, but it should nevertheless be a priority for current and future MOU areas to overcome existing challenges.

**4. Escalate work to establish viable alternatives:**

Villagers need to be shown in practice that alternative sustainable practices can provide the same or greater income as traditional fire-based methods. In communities such as Tanjung Padang, this has helped convince farmers that they do not need to burn in order to prosper. In others that are still waiting to see tangible and lasting results, the incentive to return to traditional burning methods in the longer term will likely be stronger.

**5. Fostering an entrepreneurial mindset:**

A greater emphasis on imparting more entrepreneurial attitudes among villages should be implemented to assist communities in transitioning to sustainable income-generating farming practices. Teaching them how to grow sustainably may only be half the picture - teaching them to better market and sell their produce completes that picture. This may be done through the Crew Leaders or by providing education and opportunities for village heads to establish stronger and more effective local market networks.



*One of the FFVP participating villages showing their produce at a local market in Silak.*



**QUOTE: Pak Abu Sufian, Village Head of Tanjung Datang showed a strong instinctive grasp of branding power:**

*“We grow the best pineapples we can because we want to be known in the region for our sweet pineapples”.*

## KPI ANALYSIS OF PROJECT 3 – EXECUTION AND IMPACT OF AGRICULTURAL ASSISTANCE

KPI	IMPACT	EXECUTION
Short term contribution to the reduction of burnt areas and positive engagement with the communities	MEDIUM	Despite an increasing number of communities successfully planting and harvesting crops sustainably, there remains a significant number of others that have failed to see tangible long-term benefits due to various challenges. Although it is obvious that land clearance assistance (in the form of labour and funding) is of great short term value to villages, this has not enabled them to continue clearing arable land going forward. Previous issues with machinery and equipment provided to villages are still being resolved and are preventing a strong immediate positive impact.
Long term community cultural shift, socialization, and fire free alternative livelihoods	LOW	<p>The longer term impact of providing training, machinery and equipment is yet to be seen. Some recent successes are mixed with a much greater number of cases where villages have not yet seen real lasting results. Further monitoring will be required to determine whether agricultural assistance has made a long term impact on the farming practices of the FFVP communities.</p> <p>The reality remains that it is still cheaper and easier to clear land by burning than to clear it manually. A coordinated and outcomes based agricultural assistance strategy by APRIL is required to achieve longer term change and benefits. A number of respondents also indicated that more assistance with best practices was needed going forward.</p>
APRIL’s estimated ROI	MEDIUM	USD \$74,250 was budgeted by APRIL in 2017, down by 42% from USD \$129,453 in 2016. Although results to date are not strong, agricultural assistance has the greatest potential for generating significant ROIs given the vital role that sustainable agriculture plays in deterring future burning practices, as empowered communities become economically selfsufficient and flourish.
<b>OVERALL</b>	<b>MEDIUM TO LOW</b>	

## REVIEW OF PROJECT 4 – COMMUNITY AWARENESS

Despite the reduced incidence of fire at catastrophic levels compared to previous years, there appears to be continued media attention at the local and national level. Locals interviewed could also clearly recall the devastating impact of fires and haze in previous years and the human costs that resulted (e.g. respiratory illnesses as well as severe injuries and deaths resulting from fighting the fires). In this context, it appears that APRIL's efforts to educate and socialise communities on the risks and dangers of widespread fire continue to gain strong traction.

The APRIL resources invested in community awareness (for both Fire Free Village Awareness and Fire Aware Community Awareness) are second only to the FFVP rewards project in 2017. A strong combination of highly visible signage, banners, posters, uniforms, materials, publications and programs are deployed to raise awareness among populations with very low relative standards of education, often living in remote and less accessible areas.

## COMMUNITY AWARENESS BUDGET

BUDGET: IDR 760,000,000 (USD \$63,333) for Fire Free Village Awareness project and IDR 700,000,000 (USD \$58,333) for Fire Aware Community (FAC) project, for a total of IDR 146,000,000 (USD \$121,667). This includes the cost of promotional clothing, flyers, booklets, expos and promotions, banners/boards, the Schools Program, Movie Night Program and Imam Program.

In 2017, community awareness efforts continued to expand in recognition of its central role in bringing about cultural change and educating locals in the risks, dangers and penalties related to fires and haze. Budget increases can be seen, as shown in the Table below:

	Budget	Change from previous year (%)
2015 Budget (Actual)	USD \$47,083	-
2016 Budget (Actual)	USD \$69,961	+ 49%
2017 Budget – FAC budget only	USD \$58,333	- 17%
2017 Budget – FFV budget only	USD \$63,333	- 9%
2017 Budget –FAC and FFV Awareness budgets combined	USD \$121,667	+ 74%

## NOTABLE RESULTS FOR 2017

APRIL staff continue to recognise the high impact and central importance of communication and education efforts. Communities interviewed appear to understand the clear links between fire/haze and negative environmental and health-related impacts (particularly on children). Continuing media interest and ongoing PR at a local and national level also appear to have paid strong dividends in relation to a significant increase in awareness. Interviewees reported that the majority of their communities now clearly understand these dangers and risks. Although small but significant groups of villagers remain unconvinced, a pervasive understanding of the penalties for burning also provide powerful disincentive.

FFV Awareness: Highly visible and eye-catching signage, banners, uniforms and other promotional materials and events are a constant reminder of the commitment made by villages to No Burn principles. Signage and banners (which APRIL staff indicated has been regularly replaced when worn/damaged) in areas visited were bright and positioned in high traffic areas, ensuring that fire-free principles and the related projects remain central to local village life. Bright red uniforms for FFVP staff also serve to remind locals of the constant presence of fire prevention workers.



Prominent APRIL No Burn and FFVP signage in various MOU areas – periodically replaced for wear and tear.





Prominent APRIL No Burn and FFVP signage in various MOU areas – periodically replaced for wear and tear.

The **Schools Awareness Program** continues to be a strong and valuable foundational element of the broader awareness program in FFVP villages and beyond. The impressive commitment, energy and enthusiasm of project lead, FAC Officer Riana Ekawati, drives continued awareness and education at the school age level. Riana has made significant inroads with a total of 51 local elementary schools visited and (re)engaged, with a further 30 junior high schools joining the program in 2017. Engagement comprises interactive discussion workshops, bright and engaging publication resources (e.g. comics), and teaching by Riana assisted by the local teachers. Working in partnership with local educators, the Riau Education Department and administrators, this highly-effective school messaging channel has laid the foundation for fire awareness among future leaders and community members. The strong influence children have on their parents and families also provides additional opportunity for educating whole communities.



School children participating in the APRIL Schools Program on the risks and dangers of burning.

The Bunga and Alam fire awareness comic for children: Special note should be made of the “Bunga and Alam” (Flower Girl and Nature Boy) comic first published in 2016 by APRIL, now distributing its second edition in 2017. The colourful and entertaining format of the comic has been extremely effective in raising awareness at the school level. An elementary school in Langgam was visited and the reviewer observed the second edition being distributed to excited children, with otherwise shy students eagerly jumping forward to grab copies, which they immediately read.





Excited elementary school children in Langgam receiving the second edition of the Bunga dan Alam fire awareness comic.

**QUOTE: Langgam school librarian:**

*“The comics are constantly on loan by children taking them home and sharing with their parents and families”*

Riana has also worked with children to create their own fire awareness posters and comics. Work is currently underway to compile a range of contributions into an eBook. This is likely to have a strong impact on the children, when they see that their contributions are recognised and valued.



Art by local school children participating in the APRIL Schools Program.

The **Movie Night Program** is a new awareness initiative rolled out in 2017 in partnership with local NGO Rumah Pohon (Tree House). Villagers are invited to watch popular movies in a central communal space, typically comedies and family movies to attract a broader audience and create a relaxed atmosphere. Short fire awareness videos are played before and between movies to raise awareness. Families and relatively large numbers of children have been observed participating. With some initial lack of understanding of the objectives of this program, APRIL staff reported varying (but increasingly positive) response levels in different areas to date. However, this channel presents great potential for reaching large proportions of otherwise remote communities.





*Locals and their children gathering at a Movie Night Program event in Olak where fire prevention videos are shown.*

The **Imam Program** is another new initiative, engaging local religious leaders. As a member of the local Pelalawan Religious Forum, Sailal Arimi has helped coordinate direct engagement with local religious leaders. Leading representatives from each of the Muslim, Hindu and Christian communities interviewed expressed a strong collective desire to collaborate with APRIL to spread the No Burn message to their respective communities.

Although religious and cultural sensitivities need to be carefully navigated, religious leaders are likely to be a very effective channel for raising awareness. Established social frameworks and religious organisations can be mobilized to both support and validate the No Burn message.

**QUOTE: Imam Hadil Harahap:**

*“People here listen more to their Imams and religious leaders than to the government”*

**Recommendations :**

**1. Consolidate and expand on already impressive School Program results:**

Further investment should be directed to build on the already impressive progress made in schools by expanding the program to a greater grouping of schools across larger areas. The Alam and Bunga comic should continue to be developed with future editions expanding on existing awareness themes. This will provide an excellent case study for a successful and effective program to other NGOs and administrative/government bodies.

**2. Expand school program to older school ages:**

In line with expansion into junior high schools in 2017, engagement should be expanded to senior school levels. This will target children nearing adulthood, who will begin contributing directly to their communities as leaders and responsible citizens.

**3. Continue and scale up the Movie Night Program:**

This new channel should be expanded to achieve its full potential as an effective tool for bringing together and communicating with populations in remote areas.

**4. Continue and scale up the Imam Program:**

This powerful channel for communication can be leveraged via existing social and religious networks to achieve high impact awareness messaging. With religious leaders already strongly supportive, investment should be directed to build on this channel for communication. Support for visual aids targeting poorly-educated communities, logistical and coordination efforts will have great potential to increase and maintain awareness with nominal investment.

## KPI ANALYSIS OF PROJECT 4 – EXECUTION AND IMPACT OF COMMUNITY AWARENESS

KPI	IMPACT	EXECUTION
Short term contribution to the reduction of burnt areas and positive engagement with the communities	HIGH	Communications via each of the awareness initiatives have proven to be highly effective in shifting historical mindsets and raising fire awareness. The School Program was an outstanding success in driving positive socialisation. The combined impact of all awareness efforts was impressive overall for short term results relating to culture change.
Long term community cultural shift, socialization, and fire free alternative livelihoods	HIGH	While further monitoring is required to truly validate the long term impact of education and socialisation efforts to date, it is unlikely that village populations will be able to ‘unlearn’ the dangers and risks associated with fire/haze. The extent to which they choose to behave in line with what they have learnt is a separate matter. Notwithstanding this, it is likely that awareness efforts to date will have a lasting and meaningful impact on the current level of understanding among local populations.
APRIL’s estimated ROI	HIGH	In 2017, the combined FAC and FFV awareness budget was USD \$121,667, up 74% from USD \$69,961 in 2016. The positive media attention, PR messaging and wider acceptance/adoption of FFVP principles by other NGOs, Indonesian agencies and authorities and frameworks reflects a very high ROI for a relatively modest overall investment. The very significant mindset change that has occurred can be largely attributed to these awareness programs.
<b>OVERALL</b>	<b>HIGH</b>	

### REVIEW OF PROJECT 5 – AIR QUALITY MONITORING

In previous years, air quality monitoring was not a critical element of the FFVP for stakeholders. This mindset has perpetuated into 2017 due to the current good air quality, compared with catastrophic levels in 2015. A further four Aeroqual Dust Sentry Air Quality monitors were installed in 2017, for a total of seven units positioned across APRIL’s concession sites. While these monitors provide real-time air quality measurements for APRIL, gathered data has not yet been published or shared with external parties.

## AIR QUALITY MONITORING BUDGET

**BUDGET:** IDR 221,900,000 (USD \$18,492) including service kits and data licence fees.

The cost of monitoring units installed in 2017 was incurred in previous years, which has resulted in a significant budget reduction for 2017, as shown in the Table below:

	Budget	Change from previous year (%)
2015 Budget (Actual)	USD \$63,438	-
2016 Budget (Actual)	USD \$101,850	+ 39%
2017 Budget	USD \$18,492	- 82%

## NOTABLE RESULTS FOR 2017

Initially installed to prove the correlation between air quality and negative health impacts, the absence of toxic level haze since 2015 has reduced the relevance and importance of these monitors within the broader FFVP framework. Nevertheless, the monitors remain useful tools for early detection of any significant air quality changes, particularly when approaching dangerous levels. This will prove invaluable should conditions worsen as in previous years, by enabling APRIL to raise the alarm on its established network if necessary.

There are also clear benefits from measuring air quality levels over time for data collection and analysis. APRIL may again consider the benefits of sharing this data with relevant stakeholders (e.g. communities and other authorities) to provide comparative baselines for recorded periods. By sharing data, APRIL will also demonstrate that it is acting in good faith as a responsible corporate citizen by collaborating with other bodies, such as the World Health Organisation. Local communities may also benefit by experiencing the tangible positive changes that have resulted from the FFVP and their combined efforts. Providing a clear view of the harm that fires and haze previously inflicted may also be a strong encouragement for continued and sustained No Burn efforts.



AEROQUAL Dust Sentry Air Quality Monitor – now deployed in five locations across and around the APRIL concession areas in Riau.



Potential air quality monitoring messaging and sign boards to supplement existing fire risk danger signs maintained by APRIL.

**Recommendations :**

1. **Share air quality data:** APRIL should consider sharing its data with other stakeholders, including its FFVP network, Crew Leaders and other NGOs/agencies in the region.

## KPI ANALYSIS OF PROJECT 5 – EXECUTION AND IMPACT OF AIR QUALITY MONITORING

KPI	IMPACT	EXECUTION
Short-term contribution to the reduction of burnt areas and positive engagement with the communities	LOW	It is not clear that the air quality monitors have had any significant impact on the short-term behaviour or attitudes of local communities. This is particularly so, given monitoring data is not published or shared with FFVP villages.
Long-term community cultural shift, socialization, and fire-free alternative livelihoods	LOW	It is not clear that the air quality monitors have had any significant impact on the long-term behaviour or attitudes of local communities. This is particularly so, given monitoring data is not published or shared with FFVP villages.
APRIL’s estimated ROI	MEDIUM	In 2017, the budget for air quality monitoring was USD \$18,492, down 82% from USD \$101,850 in 2016. This significantly reduced budget was for the maintenance and data licencing of the units installed in previous years. The ROI is currently low, given relatively good air quality. However, the future potential value for the purposes of early warning, real-time monitoring, and data collection/analysis over time raises the ROI to medium overall.
<b>OVERALL</b>	<b>LOW</b>	

### CONCLUDING REMARKS

As a comprehensive and coordinated framework focused on identifying and implementing effective fire prevention policies and practices, the FFVP continues to produce impressive results in a number of areas. The FFVP Rewards, Crew Leader and Community Awareness projects demonstrate that immediate and lasting positive change can occur with a considered and focused approach.

Notwithstanding results in the Agricultural Assistance and Air Quality Monitoring projects, both have significant potential to also effect immediate and long-term positive change in historically destructive burning practices.

As outlined throughout this Report, the APRIL staff involved in implementing and coordinating the FFVP have played a critical ongoing role in the successes of the various projects. They are to be much commended, as are the community leaders who have helped bring about radical cultural changes within their respective communities.

Further monitoring and evaluation of data in future years will be critical in assessing the degree to which the FFVP has had a lasting impact. Further support for the FFVP is essential to ensure key learnings to date are not lost over a longer timeframe. The significant reduction in burnt areas and haze in recent years should not be allowed to create complacency, going forward. The momentum inspired by the catastrophic fires of previous years must be maintained to harness long-term sustainable behavioural change. Without ongoing effort and the adoption of a longer-term view, the fundamental value of the FFVP initiative will be lost. This would have a devastating consequence to both the communities of Riau and the APRIL concession areas near which they are located.

**QUOTE Pak Maitizan, Village Head of Laggam:**

*“If we don’t burn here, the whole world benefits. But if it burns here, the whole world hurts.”*



# SUMMARY OF ALL RECOMMENDATIONS

## PROJECT 1 – NO BURN VILLAGE REWARDS

1. Ongoing monitoring of post-FFVP villages
2. Continued engagement with post-FFVP villages
3. Analysis of results to date
4. Facilitate communication between FFVP villages
5. Feedback from a cross-section of communities

## PROJECT 2 – CREW LEADERS

1. Continue Crew Leader presence post-FFVP
2. Ongoing monitoring of graduated villages
3. Contingency for departure of Sailal Arimi and/or Craig Tribolet
4. Additional Crew Leaders for larger and more remote areas

## PROJECT 3 – AGRICULTURAL ASSISTANCE

1. Coordination with Community Development
2. Communicate more successful case studies
3. Clear legal ownership and land use maps
4. Escalate work to establish viable alternatives
5. Fostering an entrepreneurial mindset

## PROJECT 4 – COMMUNITY AWARENESS

1. Consolidate and expand on already impressive School Program results
2. Expand school program to older school ages
3. Continue and scale up the Movie Night Program
4. Continue and scale up the Imam Program

## PROJECT 5 – AIR QUALITY MONITORING

Share air quality data



Village Heads of Patodaan and Tanjung Padang understand the close connection between fires, haze and respiratory sickness in their children.

**QUOTE: Pak Abu Sufian, Village Head of Tanjung Padang:**  
*"The children suffer most from the fires...I want my son to grow up without fire"*

APPENDIX 1 – FFVP Partner NGOs

Year	No	NGO Name	Key Contact	Core Role
2015	1	Rumah Pohon	Dede Kunaifi	<ol style="list-style-type: none"> <li>1. Socialization to 8 FFVP Village (Sering, Kuala Tolam, Kuala Panduk, Petodaan, Teluk Binjai, Teluk Meranti, Pulau Muda, and Segamai) regarding government regulation of land and forest fires</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> </ol>
	2	Bluegreen	Ahmad Rodhi	<ol style="list-style-type: none"> <li>1. Socialization regarding forest fires to 9 FFVP Village (Sering, Pelalawan, Kuala Tolam, Kuala Panduk, Petodaan, Teluk Binjai, Teluk Meranti, Pulau Muda, and Segamai)</li> <li>2. Making FFV movie</li> <li>3. Assistance, monitor, and evaluation FFV Program</li> </ol>
2016	1	Rumah Pohon	Dede Kunaifi	<ol style="list-style-type: none"> <li>1. Socialization to 7 FFVP Village (Pelalawan, Langgam, Penarikan, Pangkalan Gondai, Dayun, Olak, and Lubuk Jering)</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> <li>3. to be Committee in FFV Reward Program</li> <li>4. Technical assistance in FFA</li> </ol>
	2	Bluegreen	Ahmad Rodhi	<ol style="list-style-type: none"> <li>1. School Socialization in 50 villages ( 50 School) at 4 region Pelalawan, Siak, Kuansing, and Kampar)</li> <li>2. Making media for school socialization : Poster, Comic, and Movie</li> <li>3. Assistance, monitor, and evaluation FFV Program</li> <li>4. to be Committee in FFV Reward Program</li> </ol>
	3	Laskar Alam	Abd. Mukhti	<ol style="list-style-type: none"> <li>1. Socialization FFVP at region level - Kepulauan Meranti</li> <li>2. Socialization FFVP at distric level - Tasik Putri Puyu and Merbau</li> <li>3. Socialization FFVP at villages level - Tasik Putri Puyu, Tanjung Padang, and Lukit</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> <li>3. to be Committee in FFV Reward Program</li> </ol>
2017	1	Rumah Pohon	Dede Kunaifi	<ol style="list-style-type: none"> <li>1. Socialization to 50 Villages through movies at 4 region (Pelalawan, Siak, Kuansing, and Kampar)</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> <li>3. to be Committee in FFV Reward Program</li> <li>4. Technical assistance in FFA</li> </ol>
	2	Bluegreen	Ahmad Rodhi	<ol style="list-style-type: none"> <li>1. School Socialization in 50 villages ( 50 School) at 4 region Pelalawan, Siak, Kuansing, and Kampar)</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> <li>3. to be Committee in FFV Reward Program</li> </ol>
	3	Laskar Alam	Abd. Mukhti	<ol style="list-style-type: none"> <li>1. Socialization FFVP at region Kepulauan Meranti in 12 villages (Tanjung Padang, Tasik Putri Puyu, Lukit, Dedap, Kudap, Bumi Asri, Mekar Delima, Mekar Sari, Mayang Sari, Bagan Melibur, Teluk Belitung, and Pelantai)</li> <li>2. School socialization at 12 villages</li> <li>3. FFVP socialization through movie at 12 villages</li> <li>4. Assistance, monitor, and evaluation FFV Program</li> <li>5. to be Committee in FFV Reward Program</li> <li>6. Technical assistance in FFA</li> </ol>

Proposed 2018	1	Kabut Riau	Dede Kunaifi	<ol style="list-style-type: none"> <li>1. Socialization to 50 Villages through movies at 4 region (Pelalawan, Siak, Kuansing, and Kampar)</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> <li>3. to be Committee in FFV Reward Program</li> <li>4. Technical assistance in FFA</li> </ol>
	2	Komunitas Pecinta Lingkungan (KPL)	Surya	<ol style="list-style-type: none"> <li>1. School Socialization in 50 villages ( 50 School) at 4 region Pelalawan, Siak, Kuansing, and Kampar)</li> <li>2. Assistance, monitor, and evaluation FFV Program</li> </ol>
	3	Laskar Alam	Abd. Mukhti	<ol style="list-style-type: none"> <li>1. Socialization FFVP at region Kepulauan Meranti in 9 villages (Dedap, Kudap, Bumi Asri, Mekar Delima, Mekar Sari, Mayang Sari, Bagan Melibur, Teluk Belitung, and Pelantai)</li> <li>2. School socialization in district Tasik Putri Puyu and Merbau at region Kepulauan Meranti (12 villages)</li> <li>3. FFVP socialization through movie in district Tasik Putri Puyu and Merbau at region Kepulauan Meranti (12 villages)</li> <li>4. Assistance, monitor, and evaluation FFV Program</li> <li>5. to be Committee in FFV Reward Program</li> <li>6. Technical assistance in FFA</li> </ol>







