RSPO Smallholder Best Management Practices Manual

for Existing Oil Palm Cultivation on Peat

Chapter 6

Fire Prevention

DISCLAIMER

The statements, technical information and recommendations contained in this Manual are based on best practice and experiences, and prepared by the members of the RSPO Peatland Working Group 2 (PLWG 2) and the RSPO Independent Smallholder (ISH)-PLWG subgroup. The guidance in this Manual does not necessarily reflect the views of the RSPO Secretariat or any of the individual contributors, sponsors and supporters of the process. The publication of this Manual does not constitute an endorsement by RSPO, the PLWG, or any participants or supporters of the development of new oil palm plantations in peatland areas. While every effort has been made to ensure the accuracy and completeness of the information in this Manual, no guarantee is given nor responsibility taken for any errors or omissions, in both typographical and content, and over time the contents may be superseded. Therefore, this Manual should be used as a guide and is not intended for the management of farms on peatlands. As the results of the implementation of these practices may vary according to local conditions, neither RSPO nor the PLWG or any contributors or supporters of the process can be held liable for the results of the application of the guidance in this Manual.

This handbook is applicable to smallholders in general (refer to RSPO ISH Standard).

ACKNOWLEDGEMENT

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HOW TO USE THIS BMP MANUAL

This BMP Manual was developed with seven Chapters that focus on topics relevant for existing oil palm cultivation on peat.

Along with this BMP, an extract from the RSPO ISH Standard Auditor Checklist is provided in Annex 1 as a guide for certification bodies and it may also be used by Group Managers (GM).

Non-compliances issued to an Independent Smallholder (ISH) group shall be for the non-compliance to the requirement of the RSPO ISH Standard and not against this BMP Manual.

HOW A GM CAN BENEFIT FROM THIS BMP MANUAL

(Across all chapters)

The objective of this Manual is to provide a set of practical guidance on BMPs for GM and/or smallholders to manage existing oil palm cultivation on tropical peat in line with Criteria 4.4 and 4.5 of the 2019 RSPO ISH Standard.

APPLICABILITY OF THIS BMP DURING AUDIT

This BMP Manual was produced as a recommended guidance for ISH with existing oil palm cultivation on peat. This is not to be taken as a compulsory practice and used against certification since ground conditions may vary according to location. It is the role of the GM or smallholders to evaluate the condition of the farm before the implementation of these BMPs.

CHAPTER 6:
FIRE PREVENTION

06

Fires occur not only on dry land but also on wetland areas, such as peatlands, particularly during the dry season when these areas dry out (due to deforestation and drainage). In Indonesia, peat fires have been recorded to occur every year, even during non-El Nino (warming of the ocean surface at the Pacific Ocean) years. Therefore, plantations should be on high alert during drier months, and when ground water level drops beyond permissible level and remain low for prolonged periods. Suppressing fire on drained and deforested peatland is extremely difficult, compared with fire in other land areas. Smallholders can help in preventing peat fires by ensuring the following measures are implemented:

It is important to maintain the desired water table (40-60 cm in Malaysia and 40 cm in Indonesia) as a measure for fire prevention.

6.1
GOOD WATER MANAGEMENT

To maintain a water table 40-60 cm in plantations (40 cm in Indonesia as regulated by the Government of Indonesia). Drains to be blocked to achieve the required water table.

(Credit: Global Environment Centre, GEC)

6.2
ZERO BURNING METHOD

For land clearing/replanting – palms felled, shredded, stacked, and left in-situ to decompose naturally.

(Credit: Global Environment Centre, GEC)

6.3
COLLABORATIVE FIRE PREVENTION WITH ADJACENT COMMUNITIES AND OTHER STAKEHOLDERS

It is impossible to prevent fire individually, as burning peat (especially underground) may spread beyond the smallholders' boundary. Landowners can take proactive measures to control fires in cultivated peatlands through collaborative efforts, such as effective surveillance and monitoring with daily patrol during the dry season.

High risk of fire occurrence during the dry season – prevention and preparedness measures are needed in a collaborative manner.

The leader/owner of each farm/unit/block and sub-block is responsible for the surveillance and monitoring of their area with regards to fire prevention. In case of fire, they are responsible to notify the related stakeholders and report to the relevant agency.

Figure 1: Landowners informing neighbouring farmers to undertake survey together
(Crerdit: Global Environment Centre, GEC)

Figure 2: Possible collaboration, first response team in the field
(Crerdit: Global Environment Centre, GEC)

6.4
FIRE WARNING SYSTEM APPROACH – E.G. FIRE DANGER RATING SYSTEM (FDRS)

System to notify farmers/landowners/workers in early detection of fire risk in their area. They are then able to verify ground conditions and take necessary actions.

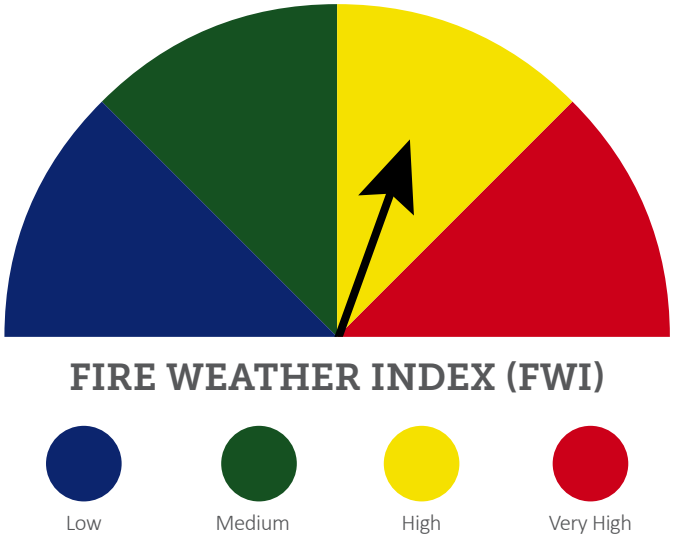

Figure 3: Fire Danger Rating System (FDRS) (Credit: Global Environment Centre, GEC)

LIST OF LIGHT EQUIPMENT FOR FIRE PATROL:

1. Fire resistance boots
2. Safety helmet
3. Fire proof hand gloves
4. Appropriate field attire (e.g. long sleeve shirt, long pants, and covered shoes)
5. Backpack sprayer
6. Fire swatter (metal scraper)
7. Parang/ machete
8. GPS device and logbook
9. First Aid Kit

ANNEX 1:
RSPO ISH STANDARD AUDITOR CHECKLIST

Criteria		Indicators		Checklist
4.4	Where smallholder plots exist on peat, subsidence and degradation of peat soils is minimised by use of best management practices. **Do any smallholders within the group have existing plots on peat? If no, SKIP**	**4.4 E**	Group manager confirms presence of peat on existing plots within the group and smallholders on peat commit to using best management practices and minimizing subsidence and degradation of peat soils (Reference 1.1 E, Annex 2).	1. Has the group manager identified the existence of peat within the group members existing plots? 2. How many of the group members have peat on their existing plots? 3. Have the smallholders signed a declaration to commit to using best management practices and minimizing subsidence and degradation of peat soils? 4. Is the group manager aware of best management practices for peat?
		4.4 MS A	Smallholders complete training on best management practices (BMPs) for peat. The group has an action plan to minimise risk of fire, to apply BMPs for plantings on peat and manage a water system in the certification unit.	1. Have smallholders participated in training on best management practices (BMPs) for peat? 2. What are the evidence of training conducted? 3. Who provided the training? 4. When was the training provided? 5. Has the group developed an action plan to minimise risk of fire, to apply BMPs for plantings on peat and manage a water system in the certification unit? 6. What are the fire fighting system available? 7. Can the smallholder demonstrate understanding on the best management practices (BMPs) for peat including the action plan to minimise risk of fire and, manage water system?

Criteria		Indicators		Checklist
4.4	Where smallholder plots exist on peat, subsidence and degradation of peat soils is minimised by use of best management practices. **Do any smallholders within the group have existing plots on peat? If no, SKIP** (Continued)	**4.4 MS B**	Smallholders implement the group's action plan based on best management practices, including fire and water management and monitoring of subsidence rate for existing plantings on peat.	1. Have the smallholders implemented the action plan to minimise risk of fire, to apply BMPs for plantings on peat and manage a water system in the certification unit? 2. What are the evidence of implementation of the action plan ? 3. What are the fire prevention and control systems available ? 4. How are the smallholders monitroing subsidence rate for existing plantings on peat ? 5. How are the smallholders monitoring the water levels for existing plantings on peat ?
4.5	Plots on peat are replanted only on areas with low risk of flooding, saline intrusion as demonstrated by a risk assessment. **Do any smallholders within the group have plans for replanting plots that are located on peat? If no, SKIP**	**4.5 E**	Smallholders commit to provide information on all plans for replanting and commit that replanting will only be in areas with low risk of flooding and saline intrusion (Reference 1.1.E, Annex 2).	1. Have the smallholders signed a declaration to commit: • to provide information on all plans for replanting and • that replanting will only be in areas with low risk of flooding and saline intrusion. 2. Has the group manager collected and compiled information on replanting by group members?

Criteria		Indicators		Checklist
4.5	Plots on peat are replanted only on areas with low risk of flooding, saline intrusion as demonstrated by a risk assessment. **Do any smallholders within the group have plans for replanting plots that are located on peat? If no, SKIP** (Continued)	4.5 MS A	Smallholders with plots on peat complete training on identification of future risks of flooding associated with subsidence and alternate land development strategies.	1. Have smallholders with plots on peat participated in training on identification of future risks of flooding and alternate land development strategies? 2. What are the evidence of training conducted? 3. Who provided the training? 4. When was the training provided? 5. Are the smallholders aware of the risk associated with subsidence? What are the identified risk associated with subsidence? 6. Have alternate land development strategies been identified?
		4.5 MS B	Prior to replanting on peat smallholders complete a risk assessment related to flooding associated with subsidence and, where there is high risk, present a plan that includes alternate land development strategies, preferencing alternative livelihood planning.	1. Is there replanting on peat by the smallholders in the group? 2. Has a risk assessement related to flooding associated with subsidence been carried out prior to replanting ? 3. What was the risks identified in the risk assessement ? 4. For high risk area, is there a plan that includes alternate land development strategies, preferencing alternative livelihood planning ? 5. Is the group manager aware of replanting activities (on peat) by group members ?

ANNEX 2:
RECOMMENDED SOP FOR FIRE PREVENTION AND CONTROL PLAN

(Adapted version courtesy of Standard Operasional Prosedur Pemadaman Kebakaran Lahan, KUD Makarti No.23/SOP-KUD-MKRSM/IV/2019)

When encountered the risk of fire, there are several steps that can be taken towards fire prevention and control:

1. Should there be fire hotspot detected, the flames should be stopped immediately with basic equipment.
2. The group members shall report to the Internal Control System of the group or Fire Emergency Unit should the basic equipment is not enough to quench the flames.
3. The Fire Emergency Unit will immediately report to the Fire Agency or related agency.
4. All group members are responsible to quench the flames and conduct the evaluation.

ANNEX 3:
RECOMMENDED TABLE/SOP FOR WATER LEVEL MONITORING

(Adapted version courtesy of ISH Group 1 Asosiasi Petani Sawit Swadaya Amanah No.022/ DOK/ SOP/ APSSA/2020 dated 12 February 2020)

1. Maintain the water level by establishing drainage channels and installing modest dams to monitor the water level.
2. Modest dam is established at specific points; specifically, main outlet and the cost will be borne by the smallholder group.
3. The high point of water level on the modest dam will be monitored every one month.
4. In order to monitor the water level, the drainage channel will be set as a water level measurement tool, which is made by PVC pipe. The length of the PVC pipe shall be 2 m (1.5 m above the collecting channel surface and the rest (50 cm) should be rooted in the soil.
5. The measurement on the modest dam will be set as 0 from the soil surface.
6. The measurements in the PVC pipe (0 cm, 10 cm, 30 cm, …150 cm) should be marked in red with a white base color and the optimum measurements (60 cm and 80 cm) should be marked in black.
7. The material of the modest dam should be waterproofed and used as a cantilever (such as bamboo) and placed in a sand sack.
8. The High Conservation Value (HCV) team identifies the location points to establish the modest dam.
9. The modest dam will be constructed once the request has been approved by the group manager.
10. Once the modest dam has been constructed, the HCV team will evaluate the effectiveness of the dam and monitor the water level every month.
11. Install the subsidence stake from the iron pipe to monitor the decrease of water level.
12. The HCV team identifies the location points from the installed subsidence stack.
13. The result shall be reported to the group manager to get approval for establishing the modest dam.
14. The subsidence stack will be constructed once the request has been approved by the group manager.
15. Once the subsidence stack has been constructed, the HCV team will evaluate the effectiveness of the dam and monitor the water level every month.

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RSPO is an international non-profit organisation formed in 2004 with the objective to promote the growth and use of sustainable oil palm products through credible global standards and engagement of stakeholders.

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