

Fleet Maintenance and Repair in South Sudan

Survey Findings



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This report describes the findings of an in-depth survey aimed at getting more insight in the procurement and maintenance challenges that organizations, operating in South Sudan, face.

Executive Summary

In March 2014 Fleet Forum facilitated a workshop addressing the challenges that organizations face with vehicle replacement and deployment in South Sudan. In total 24 delegates from 19 organizations operating in South Sudan participated in the USAID-funded workshop. During the workshop participants indicated that their organizations were confronted with several issues from the looting and destruction of vehicles to the lack of quality maintenance and local staff capacity to manage and operate vehicles in the most cost efficient and effective way.

One of the actions that came out of the workshop was to develop an in-depth survey to get more insight in the procurement and maintenance issues that organizations, operating in South Sudan, face. Fleet Forum administered the survey from April 14, 2014 until June 30, 2014 and approximately 350 representatives from over 90 organizations were notified about the survey and invited to participate.

The questionnaire was designed in collaboration with participants of the workshop. The items were intended to gather data in three essential areas: fleet maintenance and repair, procurement and the crisis in South Sudan. 13 organizations successfully completed the survey. 85% of these organizations can be classified as having a small fleet, from 0 to 100 vehicles in South Sudan, and the remaining 15% have a large fleet, with 101 to 350 vehicles.

Once the survey responses were collected and analysed, the results were summarized and interpreted in relation to possible joint solutions discussed at the workshop in order to identify areas of opportunities that can ultimately increase cost effectiveness for all organizations. The survey examines the case for:

1. Joint maintenance and repair
2. Joint procurement and delivery
3. Disposal age of vehicles
4. Leasing or vehicle pooling
5. Safety and security

The fact that 54% said vehicles breakdowns every 0-3 months coupled with an average mileage per vehicle per month of above 1,000 kilometers demonstrates the need for vehicle maintenance that is both of good quality and cost efficient. At the same time, commercial vehicle workshops are not of satisfactory quality. Research results map the number of in-house workshops and professional staff mechanics that are in South Sudan. Building a network among these workshops could be a realistic alternative to commercial workshops.

There are numerous procurement and post-procurement challenges in South Sudan; procurement lead time is an issue small and large organizations are faced with. Nevertheless, the majority of organizations have similar vehicle models in their fleet, which is why the formation of an alliance for procurement could be a lucrative solution to overcome the barriers. Joint procurement would decrease procurement lead time and give organizations the necessary vehicles to achieve programme objectives.

16% of the total fleet is more than 7 years old; this creates a continuous pressure to maintain and repair vehicles of such age. At the same time, the cost and quality of maintenance services in South Sudan is an issue. There is a need to agree upon the vehicle economic life span (at what point the costs of owning a vehicle outweigh the benefits) and dispose of it accordingly.

The survey results also indicate that the possibility of leasing or vehicle pooling is most certainly worth investigating and could be realistic and practical in the future. Various participating organizations are using vehicles of similar makes and models and at least two organizations are located in every state of South Sudan. At the same time it became clear through the research that organizations are unfamiliar with this alternative and therefore it will take time and effort to work out this solution and put it into practice.

Both small and large organizations have had vehicles looted or destroyed since the start of the South Sudan crisis. From a cost effectiveness perspective, it is important to maximize the economic life span of an organization's fleet and there could be a critical loss of value when several vehicles are permanently destroyed. 25% said vehicle downtime is more than 30 days due to maintenance and repair since December 2013; downtime results in a considerable loss of value in productivity and manpower. Increasing the safety and security of drivers and vehicles is an important subject for organizations in South Sudan and joint solutions should be investigated.

In conclusion the results of the survey shine light on the various possibilities and examines possible joint solutions. This report can serve as the basis to work out short-term solutions to joint procurement, improve maintenance, repair capacity and staff capacity building as well as develop long-term solutions for vehicle replacement and deployment in emergencies.

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1. Introduction

In March 2014 Fleet Forum facilitated a workshop addressing the challenges that organizations face with vehicle replacement and deployment in South Sudan. In total 24 delegates from 19 organizations operating in South Sudan participated in the USAID-funded workshop. During the workshop participants indicated that their organizations were confronted with the following:

- Vehicles were destroyed / stolen during and after the emergency started in December 2013 leading to disruption of programme delivery;
- Lack of good quality maintenance and repair facilities outside Juba, leading to high costs of maintenance and repair and increased down time of vehicles;
- Lack of local staff capacity to manage and operate the vehicles in the most cost efficient and effective way.

One of the actions that came out of the workshop was to develop an in-depth survey to get more insight in the procurement and maintenance issues that organizations, operating in South Sudan, face. The results and conclusion of the survey can serve as the basis to identify short-term solutions to joint procurement, improve maintenance, repair capacity and staff capacity building as well as develop long-term solutions for vehicle replacement and deployment in emergencies.

To ensure that the solutions would be further developed and implemented a second workshop took place in Juba in mid-May 2014. The preliminary results of the survey were used as a prompter to initiate discussion among participating organizations.

This report contains the analysis of the survey responses and the corresponding results. The analysis of responses and preparation of this report was conducted by a third-party organization, Pharo Consulting. For questions regarding the content of this report, please contact a representative of Fleet Forum.

2. Survey Methodology

The survey was administered by Fleet Forum from April 14, 2014 until June 30, 2014. An invitation to participate in the survey was sent through an email newsletter to all participants of both workshops in South Sudan and known organizations to Fleet Forum USAID and the Logistics Cluster South Sudan. In total approximately 350 representatives from over 90 organizations were notified about the survey and invited to participate.

The objective of the survey was to have a thorough understanding of the vehicle replacement and maintenance challenges in South Sudan in order to identify and act upon short-term solutions and jointly develop long-term solutions. Consequently, the survey questions were phrased to primarily gather quantitative data. The questionnaire was designed in collaboration with participants of the first workshop. The items were intended to gather data in three essential areas: fleet maintenance and repair, procurement and the crisis in South Sudan. The survey questions were grouped into the following categories:

- Getting to know the organization's fleet
- Fleet maintenance
- Vehicle workshops
- Non-operational vehicles
- Impact of crisis in South Sudan

An online survey tool, SurveyMonkey, was used to create and publish the survey online. On average participants were asked to answer 24 questions. Prior to deploying the survey, a test run was conducted in which two participants completed the survey and provided feedback. A copy of the survey can be found in the appendix.

Reminder emails were sent throughout the process to encourage participation. 20 organizations opened the link to the survey, of which 13 organizations were successful in completing the survey. 85% of the organizations can be classified as having a small fleet, from 0 to 100 vehicles in South Sudan, and the remaining 15% have a large fleet, with 101 to 350 vehicles. Throughout the report, a distinction has been made between organizations with a small and large fleet in order to determine whether the size of an organization's fleet has an influence on the vehicle replacement and maintenance challenges in South Sudan.

During the second workshop, representatives provided the following reasons for not completing the survey:

- Being in the field and having no internet access
- The person who had access to the fleet management data was not around
- The data is not available
- No time or busy with the emergency

A list of participating organizations can be seen below.



Figure 1: Participating Organizations in Survey

3. Survey Findings

Data was collected and analysed as described in section [2. Survey Methodology](#). The findings of the survey have been divided into the following areas of analysis:

- i. Overview of fleet in South Sudan
- ii. Vehicle workshops for maintenance and repair
- iii. Non-operational vehicles
- iv. Impact of crisis in South Sudan

3.1 Overview of Fleet in South Sudan

In this section, the analysis of responses related to sizing up the fleet of an organization and its fleet operations has been described.

3.1.1 Distribution of Fleet by Age

Respondents were asked to indicate the total number of multi-passenger off-road vehicles (for example Toyota Land Cruiser, Hi-Lux, Nissan Patrol etc.) operated - owned, hired and leased - by their organization in South Sudan according to their age.

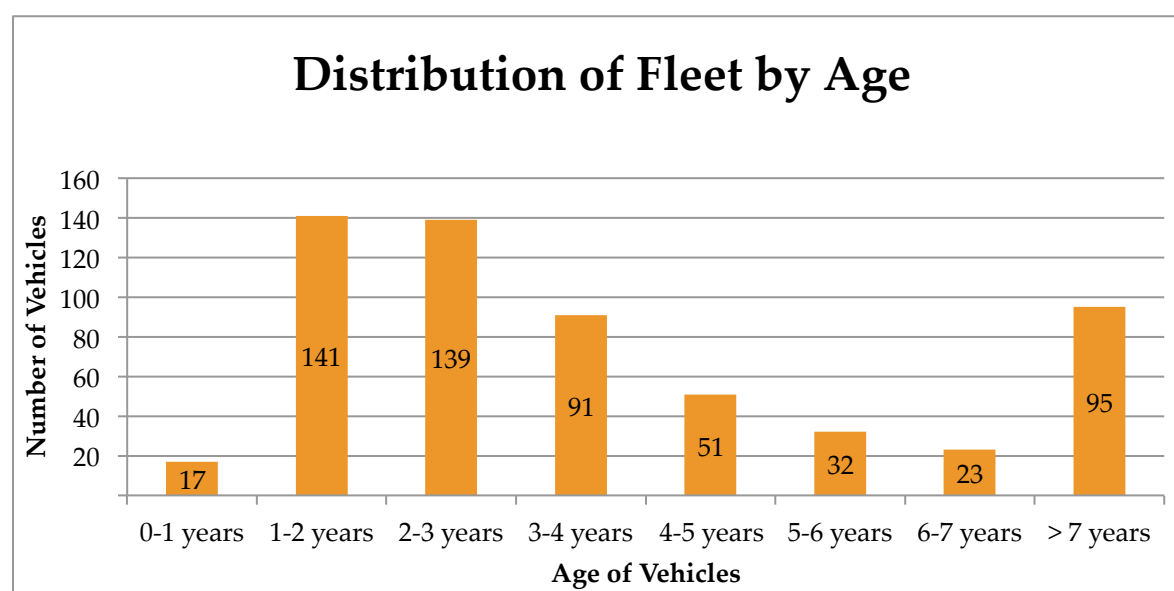


Figure 2: Distribution of Fleet by Age

From Figure 2 it can be seen that approximately 50% of the fleet is 1-3 years old. This calculation has been made based on the total fleet (589 vehicles) of participating organizations. The number of vehicles gradually decreases between the age of 3 and 7. 16% of the total fleet is more than 7 years old. Less than 3% of the total fleet (17 vehicles) falls under '0-1 years old'; this indicates that participating organizations have purchased, hired or leased notably fewer vehicles in 2013-2014.

If the data provided by large organizations is excluded from the analysis, similar trends can be observed. 45% of the total fleet of small organizations is 1-3 years old. In addition, small organizations have also purchased, hired or leased notably fewer vehicles in 2013-2014. In contrast, the fleet of small organizations is younger as such organizations possess fewer vehicles that are more than 7 years old.

3.1.2 Distribution of Fleet per State

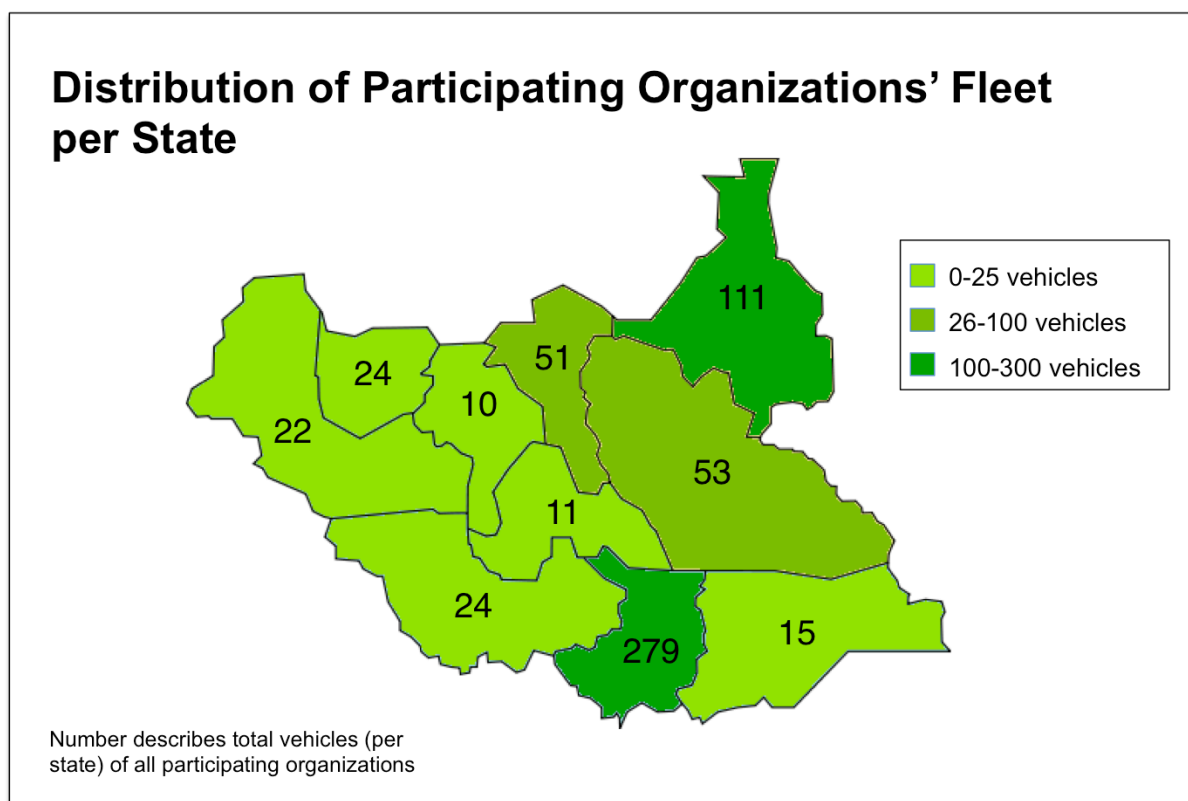


Figure 3: Distribution of Fleet per State in South Sudan

Respondents were asked to indicate the total vehicles per state in South Sudan. As can be seen in Figure 3, 65% of total vehicles is located in Central Equatoria and Upper Nile State. 17% is located in Jonglei and Unity State. The remaining 18% is spread across Western Equatoria, Eastern Equatoria, Warrap, Northern Bahr el Ghazal, Western Bahr el Ghazal and Lakes State.

All participating organizations have fleet located in Central Equatoria State; 7 organizations have vehicles located in Jonglei State; 5 organizations have fleet situated in Upper Nile, Northern Bahr el Ghazal and Lakes State. In terms of fleet, at least two participating organizations are present in every state of South Sudan. On average large organizations have vehicles in 7 or 8 states. In comparison, small organizations usually have fleet in 4 states.

3.1.3 Distribution of Fleet by Make and Model

In the survey respondents were required to provide the make, model and number of vehicles in South Sudan. The analysis of the data has been visualized in the table below.

MAKE	MODEL	NUMBER OF VEHICLES
Toyota Landcruiser	HZJ 76/78	302
Toyota Landcruiser	HZJ 79 PickUP	60
Toyota Landcruiser	HZJ 105	47
Toyota Landcruiser	Ambulance	45
Toyota Landcruiser	200	6
Toyota Hilux	Double Cabin	6
Toyota Landcruiser	Prado	3
Mercedes Actros Truck		2
Nissan Patrol		1
Tata Truck		1
Toyota Landcruiser	HZJ 75	1
TOTAL		474

Figure 4: Distribution of Fleet according to Vehicle Make and Model

The table indicates that Toyota is undoubtedly the most common make among participating organizations, with the Landcruiser HZJ 76 and 78 being the most common models, representing 63.7% of the total fleet. It should be noted that the total number of vehicles according to this table (474) does not coincide with the total vehicles distributed by age (589). This is due to the fact that two respondents did not provide specific information regarding the make and model of their organization's fleet.

3.1.4 Average Mileage

Respondents were asked to determine the average mileage in kilometers covered per month per vehicle. Three possible answers were provided: '< 500 kilometers', '500 – 1,000 kilometers' or '> 1,000 kilometers'. 9 out of the 13 participating organizations (approximately 70%) indicated that the average mileage per month per vehicle was above 1,000 kilometers. Only one organization indicated that it was below 500 kilometers. Both large organizations indicated the average mileage was above 1,000 kilometers.

3.1.5 Fleet Ownership Status

Respondents were asked "What is your fleet ownership status in terms of percentage?". In general all organizations own most of their fleet. Approximately 70% of all respondents

completely own their fleet. 35% of small organizations own 90% of their fleet and hire the remaining 10%. None of the participating organizations lease fleet.

3.1.6 Frequency of Vehicle Breakdowns

Respondents were asked “What is the average frequency of vehicle breakdowns?”. Two possible answers were provided: ‘Once every 0 – 3 months’ or ‘More than every 3 months’. 54% indicated vehicles breakdown once every 0 – 3 months on average. When comparing the responses of small and large organizations, no contrasting trends were observed.

3.1.7 Operational Lifespan of Vehicle Before Replacement or Disposal

Participants were asked to determine the average operational lifespan of a vehicle in their organization's fleet before it is replaced or disposed. Respondents could select from three options: ‘less than 3 years’, ‘3 – 5 years’ or ‘more than 5 years’. Responses were divided in this area. 54% answered 3 – 5 years, and 46% answered more than 5 years. None of the respondents chose for less than 3 years. Once again no contrasting trends were observed when comparing the responses of small and large organizations.

3.2 Vehicle Workshops for Maintenance and Repair

In this section, the analysis of responses related to maintenance schedules and utilization of workshops has been described.

3.2.1 Maintenance Schedules

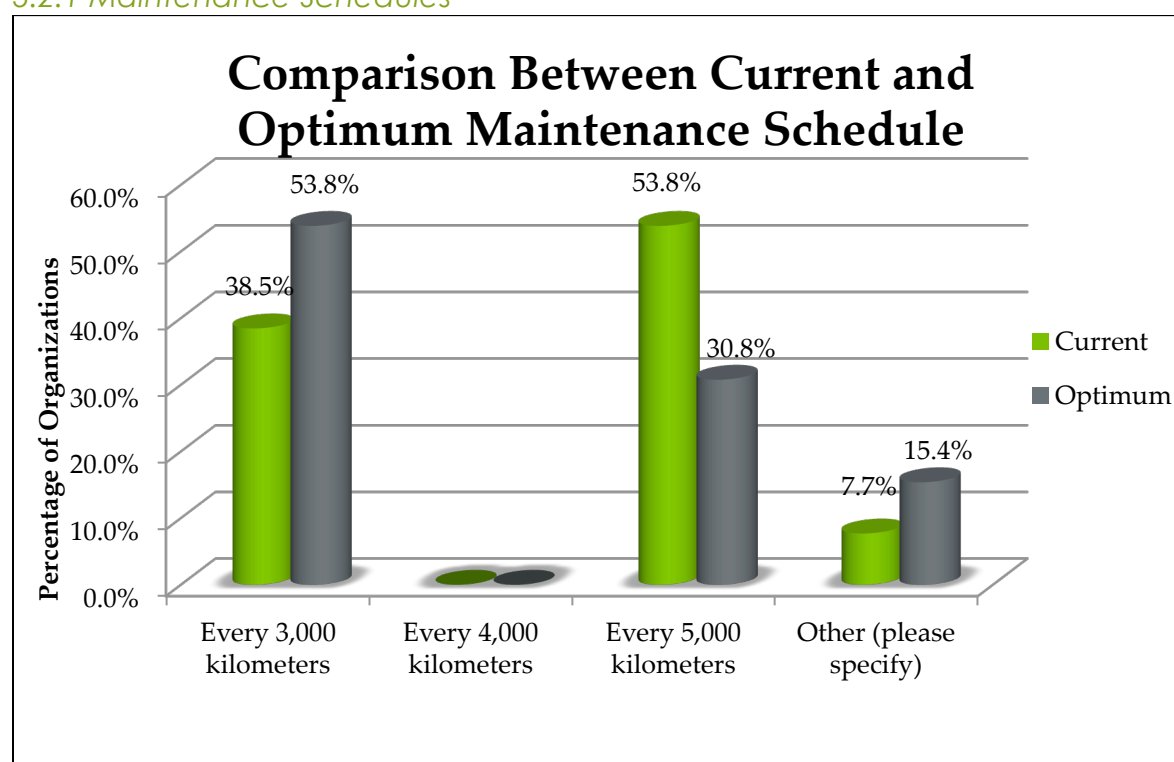


Figure 5: Comparison Between Current and Optimum Maintenance Schedules

Respondents were asked to specify their current maintenance schedule as well as the optimum schedule. For both questions, four possible answers were provided: ‘every 3,000km’, ‘every 4,000km’, ‘every 5,000km’ or ‘other (please specify)’.

Currently 54% of participating organizations maintain their vehicles every 5,000km, 38% maintain vehicles every 3,000km and 8% maintain based on need. When speaking about the optimum maintenance schedule, 54% think every 3,000km is best and 31% opt for every 5,000km with checking after every trip. The remaining 15% choose for other maintenance schedules that would include change of oil based on the heat temperatures in South Sudan or more frequent maintenance for certain remote field locations. Through the data analysis it was observed large organizations currently have a maintenance schedule of every 5,000km and think this is the optimum schedule. In addition, nearly all (small) organizations that have a 3,000km maintenance schedule would choose for the same under optimum conditions.

3.2.2 Utilization of Vehicle Workshops

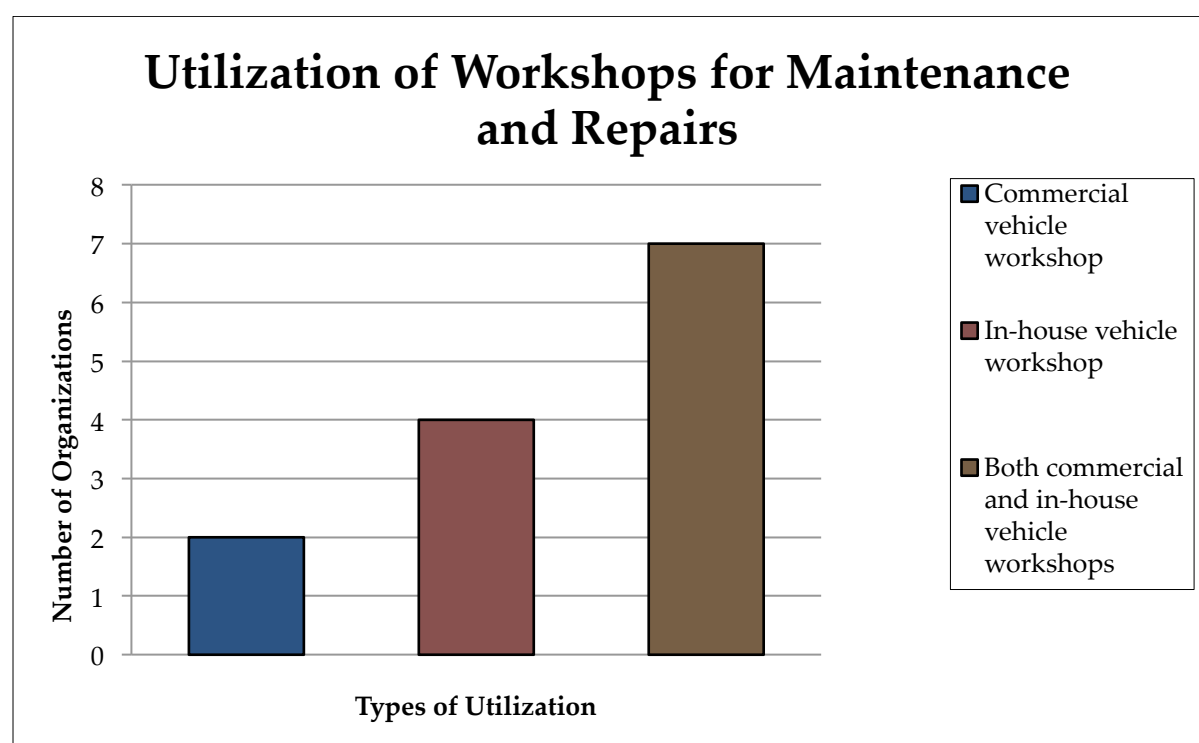


Figure 6: Utilization of Workshops for Vehicle Maintenance and Repairs

Respondents were asked whether their organization makes use of commercial vehicle workshops, in-house vehicle workshops or both. As can be seen in the figure above, 64% said they make use of both commercial and in-house workshops. There is a pattern between large organizations and the use of in-house workshops because the two organizations with a large fleet only make use of in-house workshops. Three organizations with the smallest fleet

(7 vehicles or less) only use in-house workshops or both types of workshops. Therefore there is no trend between the use of commercial workshops and small organizations.

3.2.3 In-House Vehicle Workshops

In section [3.2.2 Utilization of Vehicle Workshops](#), it was determined that 11 organizations make use of in-house vehicle workshops. Respondents of these organizations were asked to indicate the number of in-house workshops and professional staff mechanics per state. The analysis of the data has been visualized in the figure below.

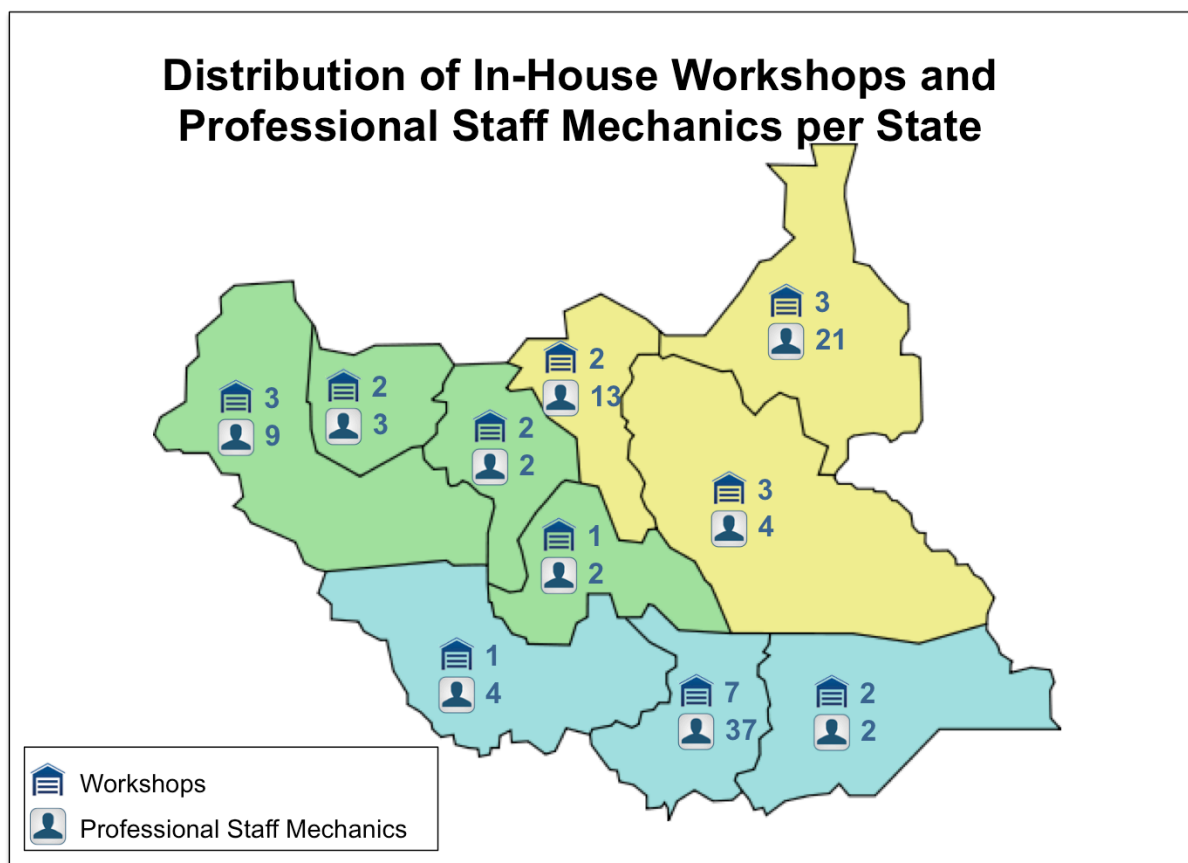


Figure 7: Distribution of In-House Workshops and Professional Staff Mechanics per State

It was gathered there is a minimum of 1 in-house workshop per state and a total of 26 in-house workshops in South Sudan. 7 workshops are located in Central Equatoria State, which is proportional given that 47% of the total fleet of participating organizations is located in the same state. This also applies to the three workshops in Upper Nile State, where 19% of the total fleet is located.

13 workshops (50% of all in-house workshops) are owned by large organizations and the other half are owned by 9 small organizations. Organizations that only use in-house workshops own 16 workshops; the other 10 are owned by organizations that use both types of workshops. In terms of professional staff mechanics, the largest workshops are located in Central Equatoria, Upper Nile, Unity and Western Bahr el Ghazal. The smallest in-house workshops can be found in Eastern Equatoria and Warrap State.

3.2.4 Commercial Vehicle Workshops

In section [3.2.2 Utilization of Vehicle Workshops](#), it was determined that 9 (small) organizations make use of commercial vehicle workshops. Large organizations do not use commercial vehicle workshops. In the survey, respondents were asked to rate the quality of maintenance – satisfactory or unsatisfactory - provided by the commercial vehicle workshops, motivate their reasoning and indicate the percentage of vehicles that break down within 1 week after maintenance and repair.

Over 65% of respondents are unsatisfied with the quality of maintenance provided by commercial workshops. There are 2 organizations that only make use of commercial workshops and both are unsatisfied with the quality. The reasons for dissatisfaction, from most to least mentioned, are as follows:

1. Price; rates for maintenance and repair are exorbitant and do not correspond to the level of service provided
2. Vehicle parts; parts provided by the workshop tend to be of substandard or even fake and break down quickly
3. Personnel; staff has limited knowledge for the role of a professional mechanic and at times can be untrustworthy or lack integrity which leads to collusion among staff members
4. Time; unnecessary delays are experienced for small fixes and occasionally vehicles are prematurely released leading to rapid break downs

In addition, those who are satisfied with the service explained that they are only satisfied with the service in Juba, and in some cases, only at specific workshops in Juba.

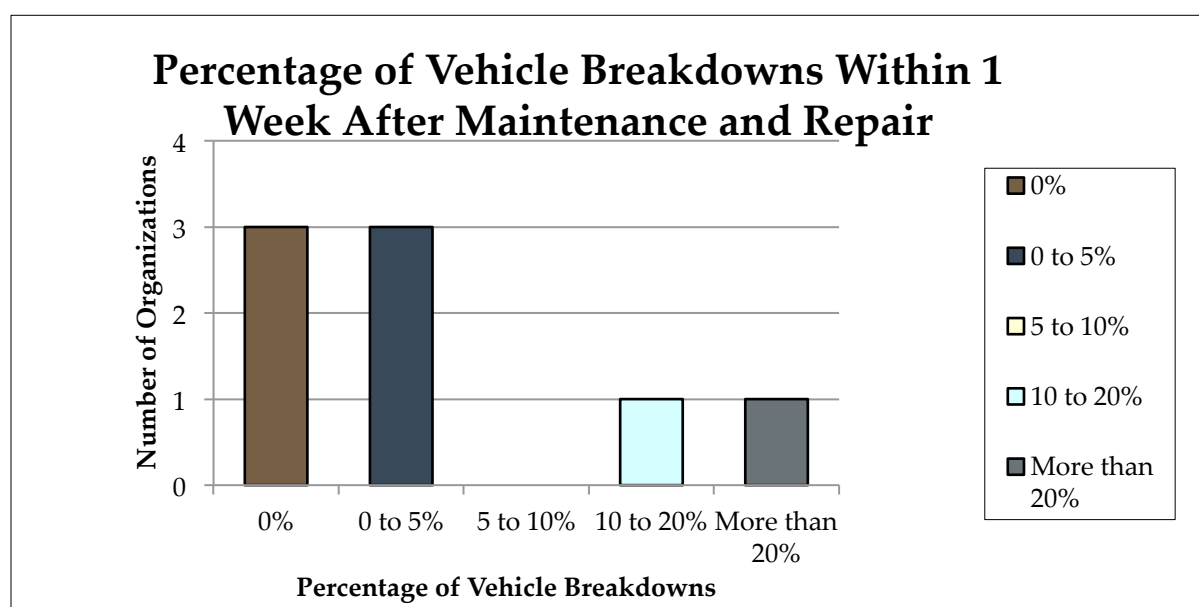


Figure 8: Percentage of Vehicle Breakdowns Within 1 Week After Maintenance and Repair

The responses in relation to the percentage of vehicle breakdowns within 1 week have been visualized (see figure 8). 1 out of 9 organizations that use commercial vehicle workshops did not respond to this question. From figure 8 it can be gathered that the majority of participants say 0% or less than 5% vehicles breakdown within 1 week of maintenance and repair.

3.3 Non-Operational Vehicles

In this section, the analysis of responses related to the number of non-operational vehicles, the reasons for being non-operational and the source of funding for vehicle repairs has been described.

3.3.1 Number of Non-Operational Vehicles

Survey respondents were asked to share the number of non-operational vehicles in their fleet. Participating organizations have 53 non-operational vehicles in total. This means on average 4.4 vehicles per organization are non-operational. Two organizations (one large and one small) significantly skewed the average of all organizations. If these two organizations are excluded from the analysis, on average 1.5 vehicles per organization are non-operational. No contrasting pattern was found when distinguishing between small and large organizations.

3.3.2 Reasons for Becoming Non-Operational

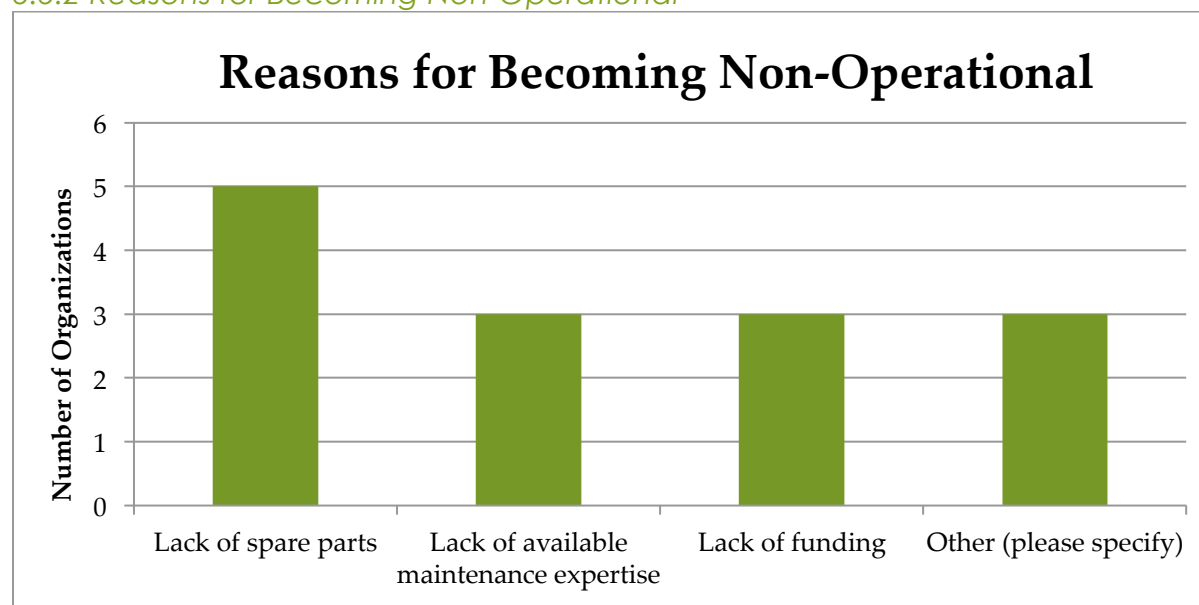


Figure 9: Reasons for Vehicles Becoming Non-Operational

Respondents were asked to indicate the reasons for vehicles becoming non-operational. Four possible answers were provided: 'Lack of spare parts', 'Lack of available maintenance expertise', 'Lack of funding' and 'Other (please specify)'. Respondents had the possibility to select one or more answers that best represented their views. Figure 9 represents the views

of 11 organizations. One participant did not provide a response to this question. Another participant stated that their vehicles are all operational.

Participants' responses were divided (see Figure 9). Five organizations explained that the lack of spare parts makes it difficult to repair the vehicles. Three organizations referred to the lack of available maintenance expertise and the lack of funding. Those who selected 'Other' indicated that the vehicles were awaiting approval to be disposed or were vandalized during the unrest in December. Awaiting approval to be disposed and lack of spare parts were cited as the reasons by the two organizations with the most non-operational vehicles (38 non-operational vehicles among both of them).

3.3.3 Source of Funding for Vehicle Repairs

Respondents were asked to indicate which donor is the expected funding source for the (non-operational) vehicle repairs. Four possible answers were provided: 'USAID', 'ECHO', 'DFID' or 'Other (please specify)'. One participant did not provide a response to this question.

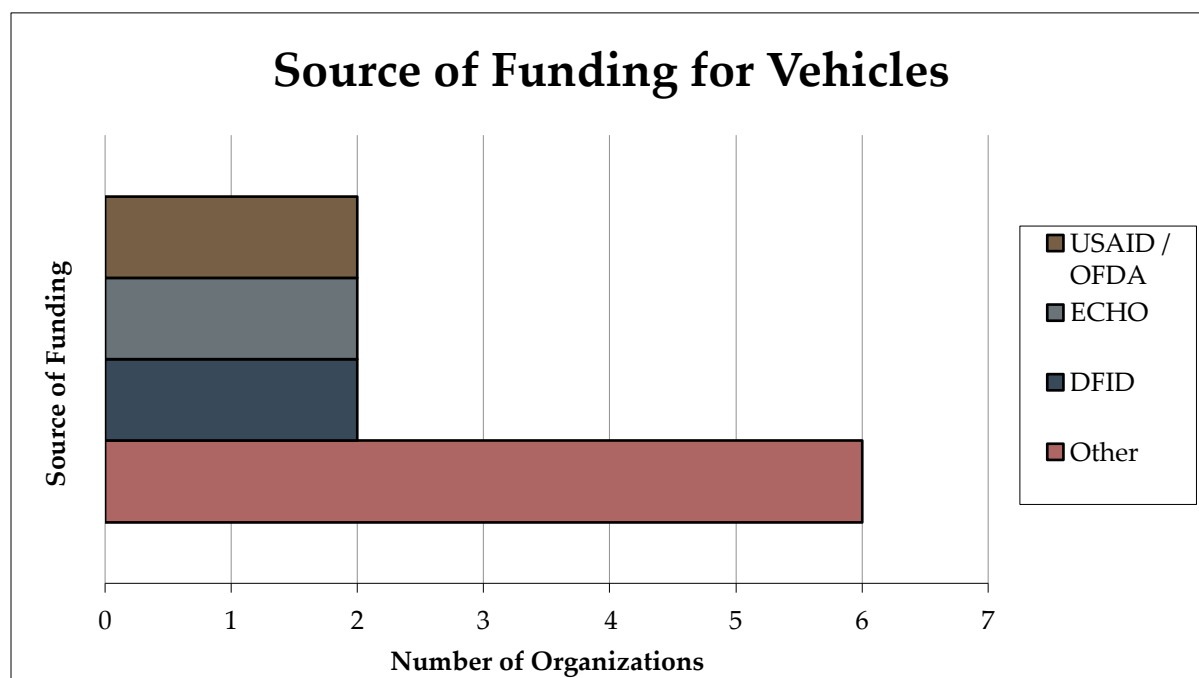


Figure 10: Source of Funding for Non-Operational Vehicle Repairs

50% of respondents said the primary source of funding is USAID / OFDA, ECHO or DFID. The organizations that selected 'Other' expect the following sources of funding to finance the vehicle repairs:

- Combination of funding from USAID, DFID, ECHO and other organizations
- Other organizations such as the German Foreign Ministry, Welthungerhilfe Germany, Norwegian Ministry of Foreign Affairs
- Private donors

3.4 Impact of Crisis in South Sudan

In this section, the analysis of responses related to impact that the South Sudan crisis has had on fleet operations has been described.

3.4.1 Vehicle Downtime

In the survey, respondents were asked to indicate the average downtime of their organization's vehicles due to maintenance and repair issues since December 2013. Six possible answers were provided:

- a) 0 to 5 days
- b) 5 to 10 days
- c) 11 to 20 days
- d) 21 to 30 days
- e) More than 30 days
- f) We don't calculate downtime

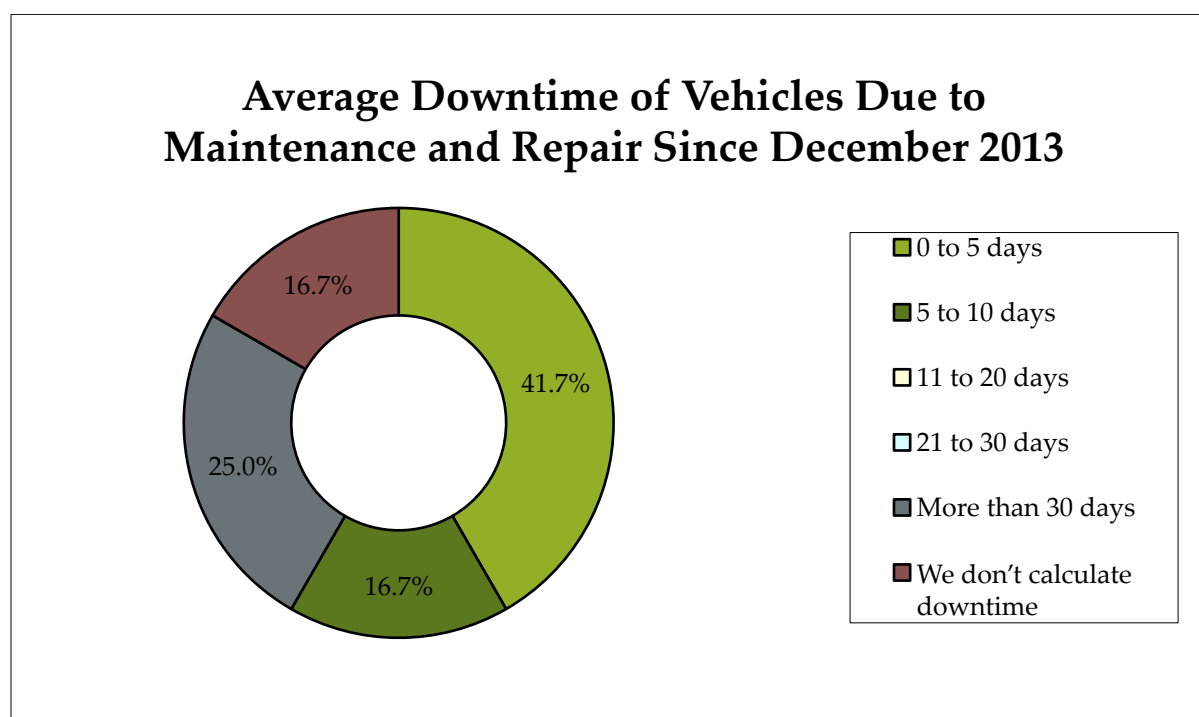


Figure 11: Average Downtime of Vehicles Due to Maintenance and Repair Since December 2013

One participant did not provide a response to this question. As can be seen in figure 11, the majority of respondents said the average downtime is 0 – 10 days. At the same time, 25% said the downtime is more than 30 days. 16.7% of the organizations do not calculate the downtime of their vehicles. Both large organizations said the downtime was 0-5 days.

3.4.2 Fleet Status

Through a 3-part question, respondents were asked to quantify the impact of the South Sudan crisis on the status of their organization's fleet by identifying:

- i. Looting and destroying of vehicles: number of vehicles belonging to the organization that have been destroyed or stolen from December 2013 to present day
- ii. Delivery: total number of vehicles procured but not yet delivered to the organization in South Sudan
- iii. Procurement: total number of vehicles planned and funded but not yet ordered from the start of October 2013

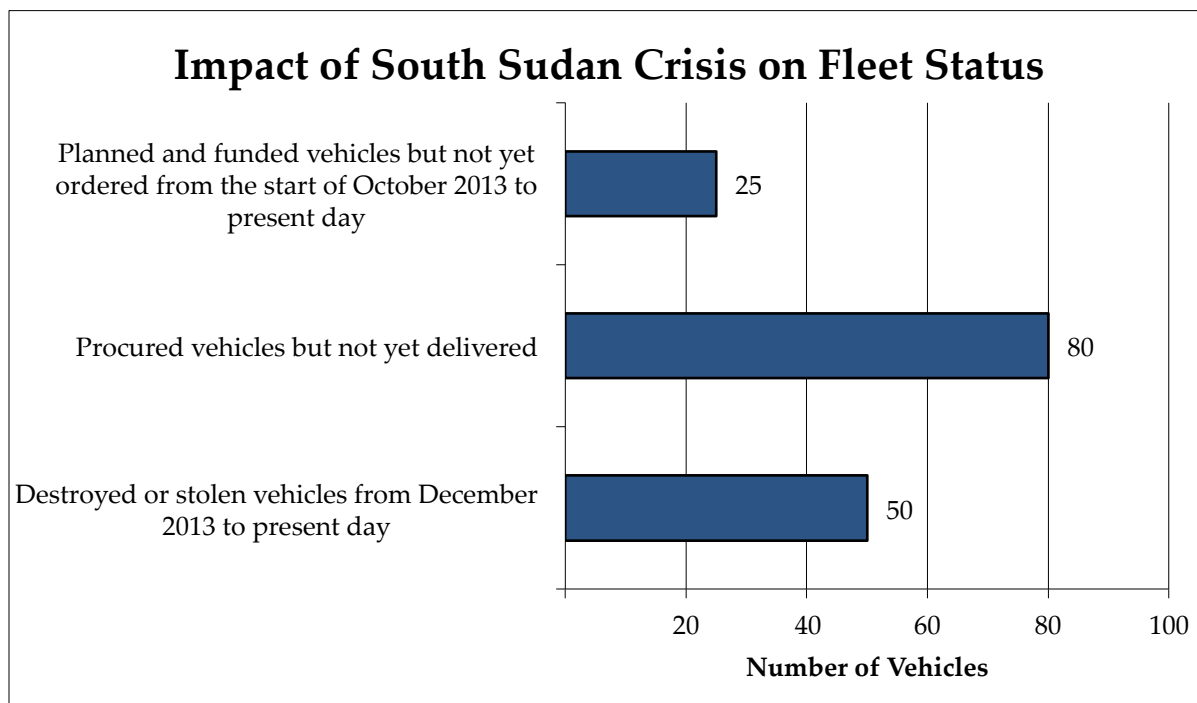


Figure 12: Impact of South Sudan Crisis on Fleet Status

One participant did not provide a response to this question. The analysis of the responses indicated that 75% of the respondents have been impacted by the crisis to varying degrees. The impact has been felt mainly by large organizations in all three spheres: looting and destroying of vehicles, procurement and delivery of vehicles in South Sudan. Small organizations have felt the impact as well, specifically when it comes to the looting and destroying of vehicles and delivery of procured vehicles. 40% of small organizations have seen 3-4 vehicles per organization stolen or destroyed since December 2013. A similar percentage has also procured 3-4 vehicles per organization but they have not been delivered to the respective organizations in South Sudan

4. Conclusion

In this section, the survey findings have been summarized and interpreted in relation to possible joint solutions discussed at the first workshop. This approach has been selected with the intention of identifying areas of opportunities that can ultimately increase cost effectiveness for all organizations.

4.1 Joint Maintenance and Repair

Through the survey analysis it was concluded that according to 54% of participating organizations, vehicle breakdowns once every 0-3 months on average. This coupled with the fact that 70% indicated the average mileage per vehicle per month is above 1,000 kilometers demonstrates the need for vehicle maintenance that is both of good quality and cost efficient. Nevertheless participants also mentioned that the quality of maintenance in commercial vehicle workshops is not only poor but also expensive especially outside of Juba. This notion is furthered reinforced by the fact the large organizations, who are more likely to have the resources and the pressure to invest in long-term solutions, only use in-house workshops.

Fortunately, survey results show that participating organizations own 26 in-house workshops of various sizes in every state of South Sudan. These workshops are also staffed by professional staff mechanics and the service is probably better and cost efficient. Additionally the majority of organizations have similar vehicle models in their fleet, which makes joint maintenance and repair a far more realistic alternative.

4.2 Joint Procurement and Delivery

It became clear from the survey results that procurement lead time is an issue small and large organizations are faced with. The results also indicated that participating organizations have purchased, hired or leased notably fewer vehicles in 2013-2014 period. This could be the result of the procurement and post-procurement challenges in South Sudan. Lastly, the majority of organizations have similar vehicle models in their fleet, which can ease the process of joint procurement. The results of the research strengthen the case for forming an alliance for procurement. By doing, procurement lead time can be decreased and organizations can have the necessary vehicles to achieve programme objectives.

4.3 Disposal Age of Vehicles

Survey results show that 46% said the average operational lifespan of a vehicle is more than 5 years. Moreover it was gathered that 16% of the total fleet is more than 7 years old; this creates a continuous pressure to maintain and repair vehicles of such age. At the same time, the cost and quality of maintenance services in South Sudan is an issue and over 65% of

respondents are unsatisfied with the quality of maintenance provided by commercial workshops. As a result there is a need to agree upon the vehicle economic life span (at what point the costs of owning a vehicle outweigh the benefits) and dispose of it accordingly.

4.4 Other

Leasing / Vehicle Pooling

Survey results revealed that the various participating organizations are using vehicles of similar makes and models. Furthermore, at least two organizations are located in every state of South Sudan. These results prove that the possibility of leasing or vehicle pooling is most certainly worth investigating and could be realistic and practical. On the other hand, none of the participating organizations lease vehicles to make up their organization's fleet. This means that organizations are unfamiliar with this alternative and therefore it will take time and effort to work out this solution and put it into practice.

Safety and Security

It was concluded from the survey analysis that both small and large organizations have had vehicles looted or destroyed since the start of the South Sudan crisis. From a cost effectiveness perspective, it is important to maximize the economic life span of an organization's fleet; approximately 50% of the total fleet is 1-3 years old, which means there could be a critical loss of value when several vehicles are permanently destroyed. 25% said vehicle downtime is more than 30 days due to maintenance and repair since December 2013; downtime results in a considerable loss of value in productivity and manpower. For these reasons increasing the safety and security of drivers and vehicles is an important subject for organizations in South Sudan and joint solutions should be investigated.

In conclusion the results of the survey shine light on the various possibilities and examines possible joint solutions. This report can serve as the basis to work out short-term solutions to joint procurement, improve maintenance, repair capacity and staff capacity building as well as develop long-term solutions for vehicle replacement and deployment in emergencies.



Appendix

Fleet Maintenance and Repair in South Sudan

Contact Details

* 1. Name of your organization

2. Your name

3. Your email address

Fleet Maintenance and Repair in South Sudan

Getting to Know Your Organization's Fleet

These questions help us understand your organization's fleet

***1. Please indicate the total number of multi-passenger off-road vehicles (for example Toyota Land Cruiser, Hi-Lux, and Nissan Patrol) operated - owned, hired and leased - by your organization in South Sudan, according to their age.**

0-1 years	
1-2 years	
2-3 years	
3-4 years	
4-5 years	
5-6 years	
6-7 years	
> 7 years	
Total Vehicles	

***2. Please provide the make, model and number of vehicles per state in South Sudan. When filling in your response, use the following format (Make, Model, Number of Vehicles). Use the same format if you have multiple models in the same state. If you do not have vehicles in a specific state, leave the corresponding box in blank.**

For example, your answer for Western Equatoria State could look like 'Toyota, HZJ 76, 7; Toyota Hilux, Double Cabin, 3'.

Western Equatoria State	
Eastern Equatoria State	
Upper Nile State	
Jonglei State	
Warrap State	
Northern Barh el Ghazal State	
Western Barh el Ghazal State	
Unity State	
Lakes State	
Central Equatoria State	

***3. What is the average mileage in kilometers covered per month per vehicle?**

- ☐ < 500 kilometers
- ☐ 500-1,000 kilometers
- ☐ > 1,000 kilometers

Fleet Maintenance and Repair in South Sudan

*4. What is your fleet ownership status in terms of percentage?

% Owned	
% Hired	
% Leased	

*5. What is the average frequency of vehicle breakdowns?

- ☐ Once every 0-3 months
- ☐ More than 3 months

*6. What is the average operational lifespan of a vehicle in your organization's fleet before it is replaced or disposed?

- ☐ < 3 years
- ☐ 3-5 years
- ☐ > 5 years

Fleet Maintenance and Repair in South Sudan

Fleet Maintenance

***1. What is your current maintenance schedule?**

- ☐ Every 3,000 kilometers
- ☐ Every 4,000 kilometers
- ☐ Every 5,000 kilometers
- ☐ Other (please specify)

2. What would be your preferred optimum maintenance schedule (specific to the operating conditions in South Sudan)

- ☐ Every 3,000 kilometers
- ☐ Every 4,000 kilometers
- ☐ Every 5,000 kilometers
- ☐ Other (please specify)

***3. Which of the following does your organization utilize in South Sudan for maintenance and repairs?**

- ☐ Commercial vehicle workshop
- ☐ In-house vehicle workshop
- ☐ Both commercial and in-house vehicle workshops

Fleet Maintenance and Repair in South Sudan

Commercial Vehicle Workshop

***1. How would you rate commercial vehicle workshops in South Sudan in terms of quality of maintenance?**

- ☐ Satisfactory
- ☐ Unsatisfactory

***2. Please motivate your rating.**

***3. What percentage of vehicles break down within 1 week after maintenance and repair?**

- ☐ 0%
- ☐ 0 to 5%
- ☐ 5 to 10%
- ☐ 10 to 20%
- ☐ More than 20%

Fleet Maintenance and Repair in South Sudan

In-House Vehicle Workshop

***1. Please indicate the number of in-house workshops per state in South Sudan.**

Western Equatoria State	
Eastern Equatoria State	
Upper Nile State	
Jonglei State	
Warrap State	
Northern Bahr el Ghazal State	
Unity State	
Lakes State	
Western Bahr el Ghazal State	
Central Equatoria State	

***2. Please indicate the number of professional staff mechanics per state in South Sudan.**

Western Equatoria State	
Eastern Equatoria State	
Upper Nile State	
Jonglei State	
Warrap State	
Northern Bahr el Ghazal State	
Unity State	
Lakes State	
Western Bahr el Ghazal State	
Central Equatoria State	

Fleet Maintenance and Repair in South Sudan

Commercial and In-House Vehicle Workshops

***1. How would you rate commercial vehicle workshops in South Sudan in terms of quality of maintenance?**

- ☐ Satisfactory
- ☐ Unsatisfactory

***2. Please motivate your rating below:**

***3. What percentage of vehicles break down within 1 week after maintenance and repair?**

- ☐ 0%
- ☐ 0 to 5%
- ☐ 5 to 10%
- ☐ 10 to 20%
- ☐ More than 20%

***4. Please indicate the number of in-house workshops per state in South Sudan.**

Western Equatoria State	
Eastern Equatoria State	
Upper Nile State	
Jonglei State	
Warrap State	
Northern Bahr el Ghazal State	
Unity State	
Lakes State	
Western Bahr el Ghazal State	
Central Equatoria State	

***5. Please indicate the number of in-house professional staff mechanics per state in South Sudan.**

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Fleet Maintenance and Repair in South Sudan

Non-Operational Vehicles

***1. Please indicate the total number of vehicles in your fleet currently not operational, awaiting repairs and / or spare parts.**

***2. Please indicate the reason(s) for the vehicles becoming non-operational. You may choose more than one reason from the list and describe other reasons if there any.**

- ☐ Lack of spare parts
- ☐ Lack of available maintenance expertise
- ☐ Lack of funding
- ☐ Other (please specify)

***3. Please indicate which donor is the expected funding source for these vehicle repairs. If it is funded by other donors or other sources, please specify the source of funds.**

	USAID	ECHO	DFID	Other
Funded by donors	☐	☐	☐	☐

Other donor organization or funding source (please specify)

Fleet Maintenance and Repair in South Sudan

Impact of South Sudan Crisis on Fleet

***1. What is the average downtime of your vehicles due to maintenance and repair issues since December 2013?**

- ☐ 0 to 5 days
- ☐ 5 to 10 days
- ☐ 11 to 20 days
- ☐ 21 to 30 days
- ☐ More than 30 days
- ☐ We don't calculate downtime

Additional comments

***2. Please indicate the following:**

Number of vehicles belonging to your organization that have been destroyed or stolen from December 2013 to present day

Total number of vehicles procured but not yet delivered to your organization in South Sudan

Total number of vehicles planned and funded but not yet ordered from the start of October 2013 to present day

Fleet Maintenance and Repair in South Sudan

Workshop on ‘Vehicle Replacement and Deployment Challenges in South Sudan’

***1. Will you participate in the 2nd workshop to be held 14th and 15th May in Juba, South Sudan?**

☐ Yes

☐ No

2. If yes, then please share the following details of persons who will attend:

Participant 1: Name	
Participant 1: Email address	
Participant 2: Name	
Participant 2: Email address	
Participant 3: Name	
Participant 3: Email address	
Participant 4: Name	
Participant 4: Email address	
Participant 5: Name	
Participant 5: Email address	

3. Please include any additional remarks or questions you may have below: