



WWF®

REPORT

2022



LIFE ON THE FRONTLINE OF TIGER PROTECTION

A survey of the working conditions of patrol rangers
employed in Asia's tiger landscapes



PROJECT TEAM

Mike Belecky, Rohit Singh, William Moreto

LAYOUT, DESIGN & ILLUSTRATION

Layout by Kreeti Shakya, adapted from a design by Catalyze for the report *Life on the Frontline 2019: a Global Survey of the Working Conditions of Rangers*.

COVER PHOTO

© Rohit Singh, WWF-US

Disclaimer: The responses provided by rangers in this survey do not necessarily represent the position of WWF.

CONTENTS

Executive Summary _____	3
Survey Numbers and Methodology _____	5
Tiger Site Survey Results _____	7
Employment _____	9
Equipment _____	11
Health and Insurance _____	13
Training _____	15
Community Relations _____	16
Misconduct _____	17
Summary of all other responses _____	19
Regional Comparisons for key survey questions _____	25
Comparison of responses from tiger sites versus non-tiger sites in survey countries _____	29
Ranger Densities _____	36
Recommendations _____	37

| Executive Summary

With both the Lunar Year of the Tiger and a second global summit on tiger conservation arriving in the coming months, it is an appropriate time to reflect upon - and then strive to improve - the conditions under which rangers work. Given the fact that poaching remains the single greatest threat to the species, the connections between well-supported rangers and tiger conservation successes are direct and obvious.

This publication provides considerable insights on the current realities of ranger work within the tiger landscapes of ten countries that still have confirmed tiger populations. It does so by presenting the results from 1,599 surveys completed by public sector patrol rangers at their place of work between 2016 and 2019 - more than one hundred conservation areas in total.

This report is divided into four sections. The first section gives the averaged results (across all tiger sites) for all 197 survey questions. The second and third sections take a small subset of those questions that were deemed particularly critical to ranger wellbeing and safety. Section 2 compares the averaged responses to those questions, separated by sub-region: South Asia (Bangladesh, Bhutan, India, Nepal), Southeast Asia (Indonesia, Malaysia, Myanmar, Thailand), and East Asia (China, Russia). Section 3 then compares responses from rangers within tiger landscapes to those outside tiger landscapes for eight tiger range countries. The final section of the report addresses the importance of ensuring adequate ranger densities in tiger landscapes. The document concludes with a set of recommendations informed by the survey findings.

The combined findings indicate that for many rangers the problems start early, given that more than one-third of respondents indicated that the initial training they received was inadequate to prepare them for the realities of their job. This suggests the need for a thorough review and possible modification of training curricula in many jurisdictions. It is possible that some trainings are outdated or otherwise inadequate for the challenges faced by today's rangers.

Necessities are also lacking, with less than half of rangers saying they have access to clean drinking

water on patrols. As such, huge numbers in this sector are placed at a heightened risk of contracting preventable illnesses.

About four in ten rangers felt their shelter was inadequate for the work they are required to do - and about three in ten said they are either often or always forced to sleep in the open (without even a tent) when on overnight patrols.

Inadequacy or non-availability of key equipment is another issue that putting rangers at risk in tiger landscapes. Almost half of respondents believed that even their most basic equipment (uniform and boots) is insufficient for the job they do.

Even more troubling is the fact that 55 per cent of rangers surveyed stated that they never or rarely have access to communication devices during patrols. The inability to communicate information in real time makes an already dangerous job even riskier.

Compounding the above issues, is the finding that a slight majority of rangers believed that medical treatment would not be adequate when most needed.

Considering the many shortcomings outlined, it is alarming that a considerable majority of rangers (about two-thirds) said they were not provided with insurance coverage for serious on-job injuries or death. This insecurity is likely a major mental burden not only for rangers, but their families as well. Given the inherent danger of ranger work, anything less than full insurance coverage should be deemed a major failure.

As to other workplace benefits, only about half said they were given paid sick leave or paid annual leave. Only a slight majority of survey respondents believed they are being paid a fair wage, and more than one-third claimed to have been paid late on at least one time during the preceding 12-month period.

Roughly one in four rangers in tiger areas reported an incident of verbal abuse from the public during the previous year. The finding suggests that ranger employers should make greater investments in community outreach, and seek to implement programs that directly benefit and engage local people.

Although rangers reported low rates of corruption among colleagues, a majority indicated they would be concerned for their safety if they were to report colleagues for corrupt or illegal activities. With this finding in mind employers should look to install strong protections for those who would report such cases.

When assessing survey questions by category, it was found that rangers were most pessimistic about the job reward (pay, promotion and recognition) and the effectiveness of the legal-judicial system in preventing and punishing wildlife crime. They were most positive when it came to pride in their work, and a sense that their job was important.

On the regional variation between responses (section 2), the pattern most frequently observed was that East Asian tiger rangers reported more favourable working conditions than Southeast Asian rangers, who in turn reported better conditions than South Asian rangers. It is important to note that this did not hold across all questions – in some cases the result was quite different.

When comparing conditions of rangers within to those outside tiger conservation areas (section 3),

the most common finding was that those outside tiger areas reported slightly better working conditions. This is both problematic and surprising, particularly given the incredible biodiversity, cultural, and economic importance of tiger landscapes.

Preliminary estimates of ranger densities (section 4) suggest it likely that many tiger range countries do not currently deploy rangers at adequate densities across their tiger conservation areas. Ranger density is of such importance to tiger conservation that it should be seriously considered as a key area for tracking in the subsequent phase of the Global Tiger Initiative.

This release of this report is timed to coincide with the 4th Asia Ministerial Conference on Tiger Conservation, where government and nongovernmental experts will work together to advance the preservation of that incredible species. This report gives a strong voice to those rangers working to protect tigers, and shares with us many of their most pressing challenges and concerns. It now falls on government employers and their partners to answer that call.



I Survey numbers and methodology

The ranger survey results shared in this report include 1,599 individual respondents working in tiger landscapes between 2016-2019 (Table 1). For purpose of this report, participation was limited to public sector patrol rangers working within a conservation area that overlaps with the IUCN 'extant' mapping layer for tigers. It includes results from 10 of the 13 tiger range countries (TRCs). Although not included in this publication, surveys were conducted in two additional TRCs (Cambodia and Viet Nam).

These 'tiger landscape' survey findings are a subset of a larger global survey of 7,110 rangers carried out at 465 sites across 28 countries between September 2016 and October 2019, often in collaboration with local organizations. The results of that global survey and several additional ranger-related topics are covered in WWF's 2019 publication *Life on the Frontline 2019: A Global Survey of the Working Conditions of Rangers*.

The survey delivery study was guided by the following principles and approaches:

Collaborative development: The lead survey project team included three individuals; two from the

World Wide Fund for Nature (WWF) and one from the University of Central Florida (UCF). However, dozens of experts were invited to give inputs during its development, which resulted in several important additions. In 2015, prior to any data collection, a two-day workshop was held in Cambodia, during which experts (including rangers) met to discuss the draft survey and interview instruments. This enabled the project team to better contextualize both the questions and the logistics required to standardize data collection across numerous countries.

Public-sector and patrol rangers as sole survey targets: Two key criteria were used to determine eligibility for participation in the survey. One was that the rangers should be in the public sector, in the sense that they are paid wages by a government, and their position is characterized by accountability and duties to a government authority. The second prerequisite was that the ranger taking the survey must be involved in patrolling activities on a regular basis. It is also worth noting here that rangers go by multiple designations, with many survey respondents not formally referred to by the term 'ranger' in their home country

Country	Number of rangers surveyed in tiger conservation areas	Total number of tiger conservation areas included	Years during which surveys delivered	Local survey delivery partner
Bangladesh	62	2	2017	IUCN Bangladesh
Bhutan	51	7	2018	-
India	571	13	2016-18	Global Tiger Forum
Nepal	116	14	2017	-
Indonesia	297	18	2018	KEHATI
Malaysia	102	19	2017	University of Nottingham Malaysia
Myanmar	17	3	2017	-
Thailand	199	10	2019	Kasetsart University
China	98	11	2018	-
Russia	86	5	2018	-
Total	1,599	102	2016-19	

Table 1: Number of rangers and conservation areas included in the survey of rangers working in tiger landscapes (including years during which surveys were completed).

Organizational and geographical representativeness, plus consistency in national sample size selection:

In surveyed countries considerable efforts were made to obtain an accurate estimate of the total number of public sector patrol rangers. Plans were then designed around the objective of delivering surveys to roughly 20 per cent of rangers in each country, to an upper limit of roughly 750 responses. To the extent possible, survey sites were then selected in a manner reflective of the overall geographical and organizational distribution of rangers across that country. Examples of the latter would include distribution of rangers between ministries (e.g., environment versus forestry) or between different levels of government (e.g., federal versus state or provincial). In two countries (Russia, China) surveys were limited to a small portion of their overall territory that included or was near to tiger sites. While random sampling is often viewed as the best approach for survey research, the study adopted a convenience sampling strategy since random sampling would have been limited by an inability to approach some rangers located at remote outposts.

Questions spanning a 12-month timeframe: Many of the survey questions prompted rangers on events that happened during the preceding 12 months at their workplace. By covered an entire year, this approach minimized the risk of skewing responses to questions influenced by seasonal variations (e.g., malaria infection rate, likelihood of contact with community members, etc.)

High-quality translations: The survey was translated into national or local languages when required, and the quality of each survey was verified by field staff working closely with rangers in each case. In instances in which the survey respondent was illiterate, a member of the survey delivery team would read the questions aloud to that person and assist them in recording their responses.

Training of survey delivery teams: The numerous teams that delivered surveys to rangers at selected ranger work sites were each provided with a comprehensive survey protocols document for reference and trained on those protocols, either in person or online by the core project team. Survey sites were almost exclusively individual protected areas, but in rare cases a training center or headquarters.

Strong privacy protections: Prior to the start of both surveys and interviews, informed consent procedures were followed. Rangers who were offered the opportunity to partake in the survey were informed that their participation was entirely voluntary. As an added layer of anonymity protection for surveys and confidentiality for interviews, verbal consent was provided to ensure that respondents did not have to record or sign their names. Survey and interview takers were provided with an alphanumeric code that corresponded to their submitted response sheets, which they could later reference at any point if they wished to have their response sheet destroyed and removed from future analysis.

To encourage full honesty, respondents were informed that neither individual responses nor site-specific results would be shared directly with their departments or any government officials. This was done to protect the safety and job security of both survey respondents and their managers at individual sites. Responses were at all times kept in the possession of survey delivery teams, which in all cases were composed entirely of non-governmental staff.

Additional factors impacting surveys: Although it is hoped that all results are an accurate reflection of ranger opinions, certain complicating factors should be acknowledged when conducting broad social science surveys of this kind, including:

- Cultural variation when it comes to expressing opinions on matters such as happiness, dissatisfaction, or other topics that can be highly sensitive in some regions (e.g., criticism of superiors, corruption, sexual misconduct, etc.)
- Sample sites selected are unlikely to be perfectly representative of a country as a whole. Financial limitations precluded the option of sampling at every single protected area in which rangers work in these countries.
- Some words or concepts used in the original English-language survey did not have precise counterparts in the language of the translated documents. This may have influenced responses for a limited number of questions.

The three issues above were mitigated to the extent possible by seeking advice from individuals familiar with the local organizational, cultural, and linguistic contexts at various survey locations.

Combined Tiger Landscape Ranger Survey Results

Average

Age 40 years old

Time in current organization 14.2 years

Work as a ranger 13.4 years

Work in current conservation area 9.9 years

	Frequency	Percent
<i>Gender breakdown*</i>		
♀	73	4.6%
♂	1,526	95.4%

Rangers surveyed 1,599

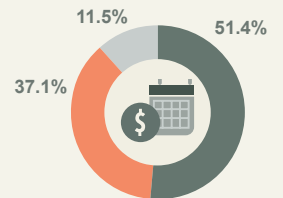
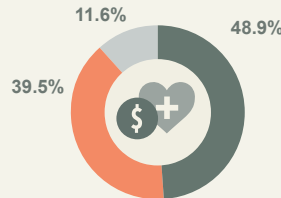
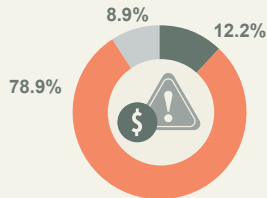
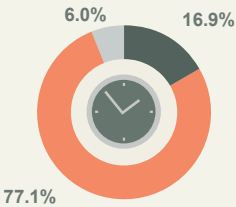


Employment



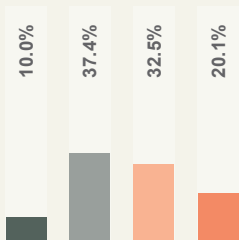
Benefits from the work that I do

● Yes ● No ● Unsure



I am paid a fair wage

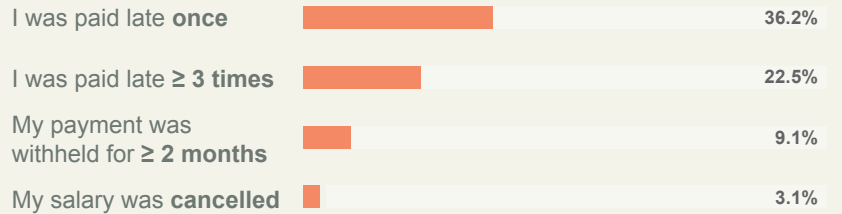
● Strongly agree
● Agree
● Disagree
● Strongly disagree



During the last 12 months

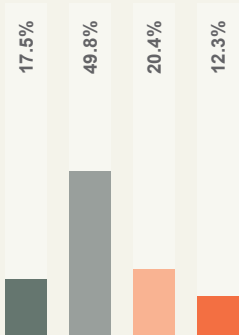
■ Yes ■ No

0% 20% 40% 60% 80% 100%



I am satisfied with my chances for promotion and advancement

● Strongly agree
● Agree
● Disagree
● Strongly disagree



USD 328.49 monthly

I am paid this much in my local currency (USD)

6.7% have other jobs

I have other paid jobs besides being a ranger

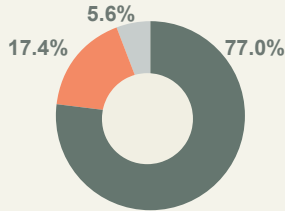
Average hours I work weekly

Total Per Week
66.0 hours
6 PM-6 AM
24.2 hours

*In data visualizations the colour orange correlates to the more concerning or 'negative' response categories for all non-neutral questions
 *Quotes with no citation are from rangers who were interviewed after completing the survey

Type of employment contract

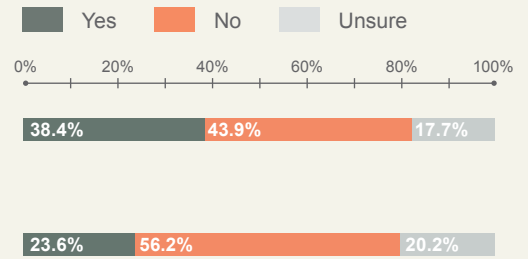
- Permanent
- Limited duration
- No contract



I have access to

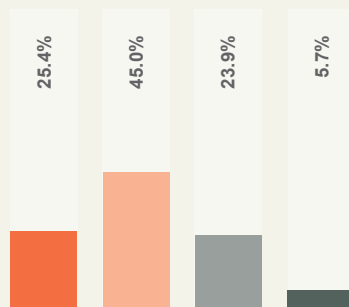
A union, work council or similar committee that represents employees

A union, work council or similar committee that can 'collectively bargain' on my behalf



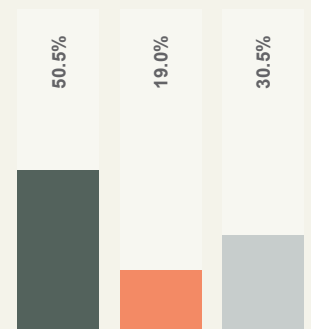
Being a ranger is a more difficult job than most people have in my country

- Strongly agree
- Agree
- Disagree
- Strongly disagree



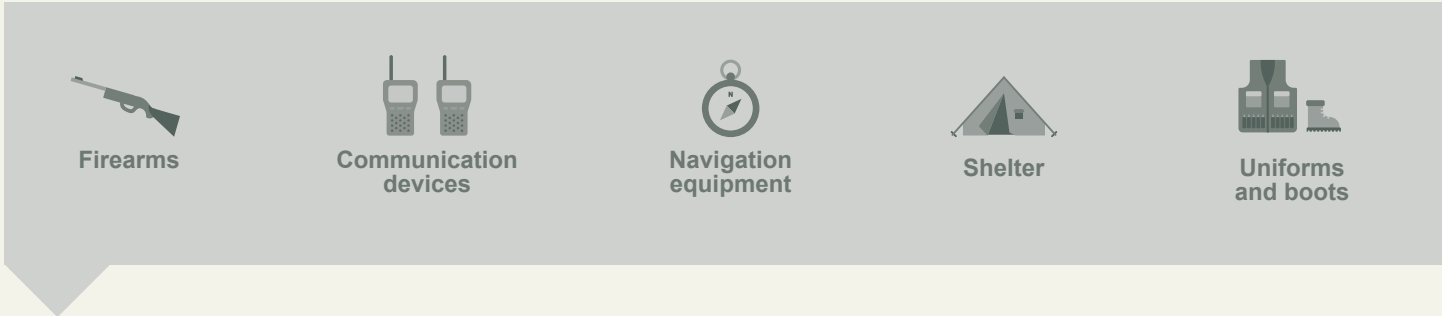
My organization is required to provide notice of termination

- Yes
- No
- Unsure

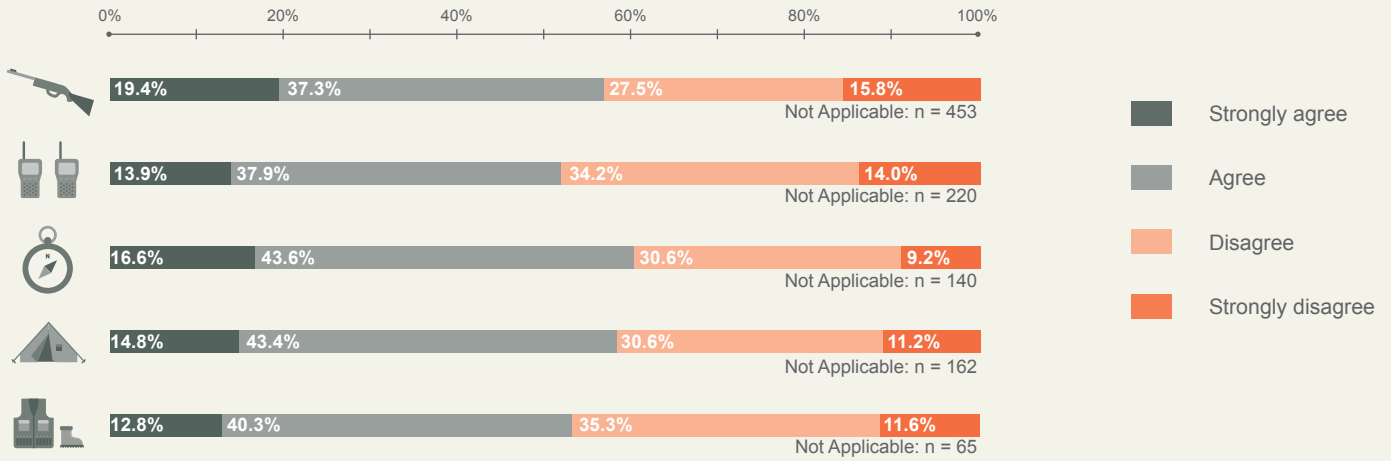


“ WHAT I LOVE MOST ABOUT BEING A FOREST RANGER IS THAT IT ALLOWS ME TO BE IN THE FOREST AS IF I WERE IN MY OWN HOME. I'VE LOVED THE FOREST HAS BEEN SINCE I WAS LITTLE BECAUSE I WAS BORN NEAR THE FOREST. MY PARENTS ARE ALSO FOREST RANGERS. ”

Equipment



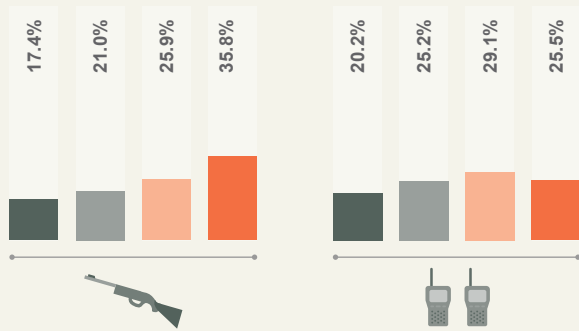
The equipment provided is sufficient for the work that I do



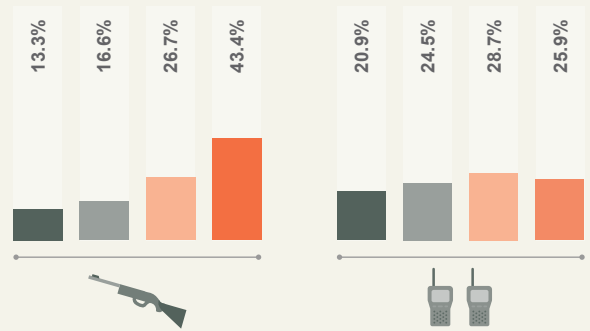
“ I LIKE BEING A RANGER BECAUSE IT GIVES ME OPPORTUNITIES FOR LEARNING NEW CONSERVATION METHODS, INTERACTIONS WITH PEOPLE, AND ALLOWS ME TO LIVE IN CLOSE ASSOCIATION WITH NATURE. I ALWAYS WANTED TO SEE MYSELF IN THIS UNIFORM. ”

● Always ● Often ● Rarely ● Never

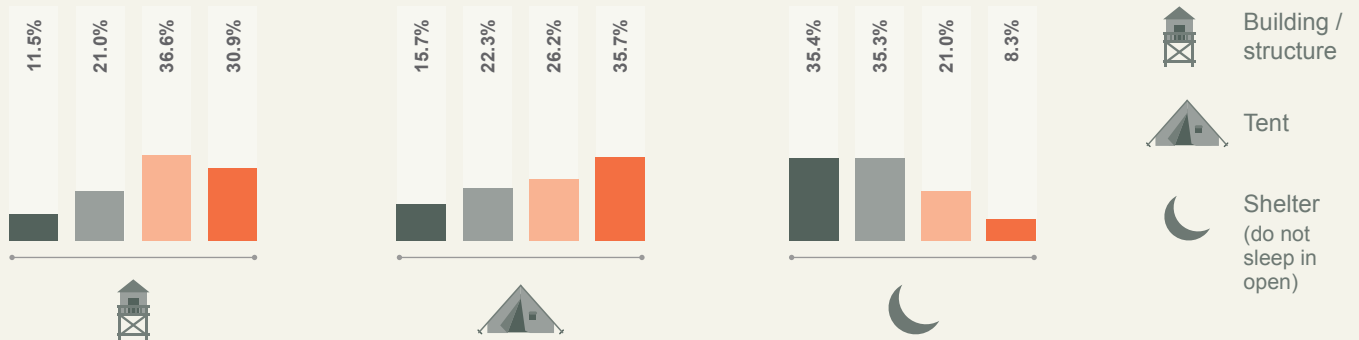
On patrol, I have access to



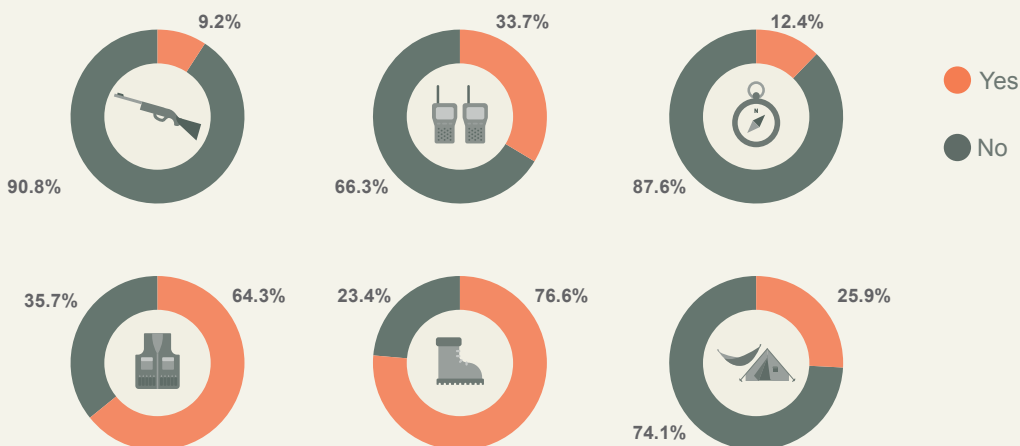
At outpost/station, I have access to



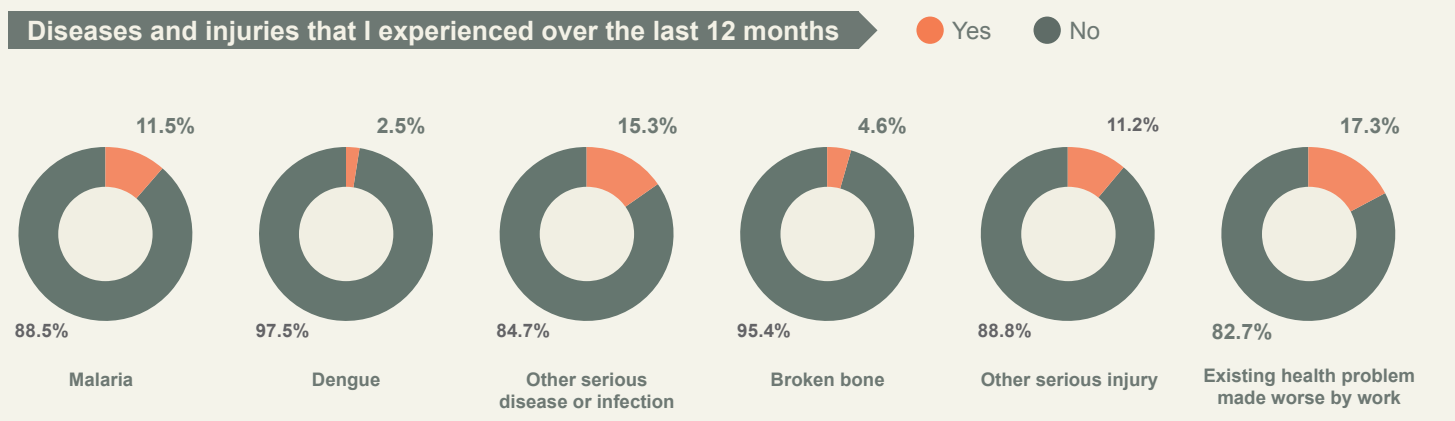
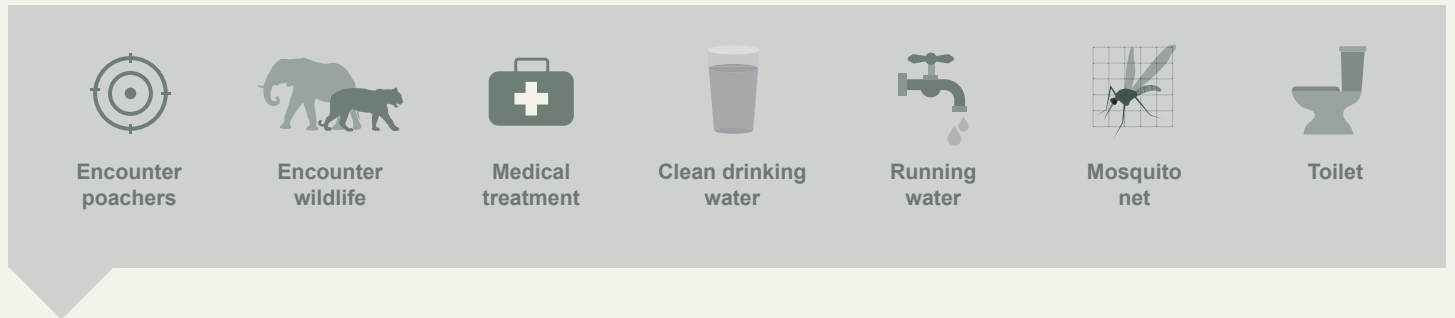
When I am on patrol overnight away from my main ranger base, I have access to



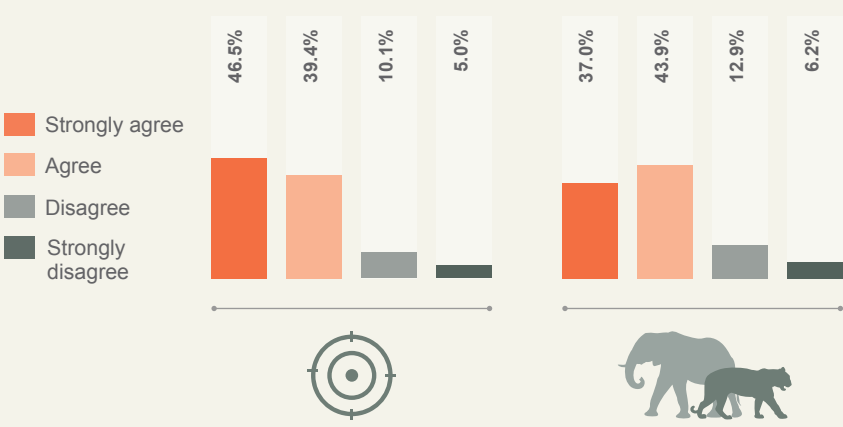
I bought the following equipment with my own money



Health and Insurance

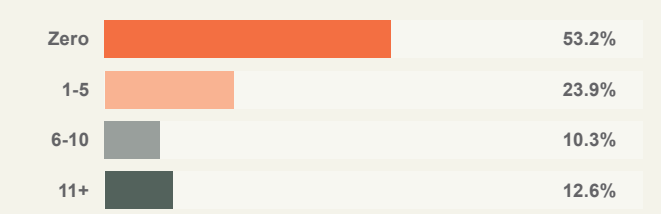


I think that being a ranger is a dangerous job due to chance of



”
WHEN WE GET INJURED IN THE JUNGLE IT IS DIFFICULT TO GET MEDICAL TREATMENT.
 “

In the last 12 months how many days were you absent due to health-related leave?



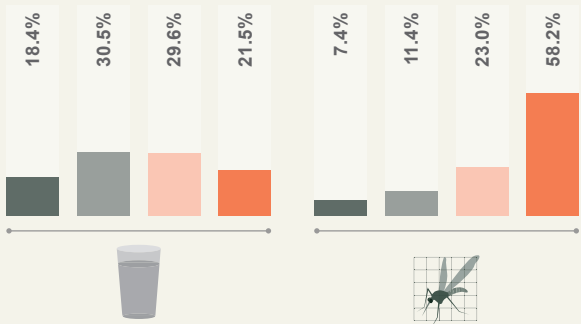
Average number of coworkers who accompany me on patrol

4.34

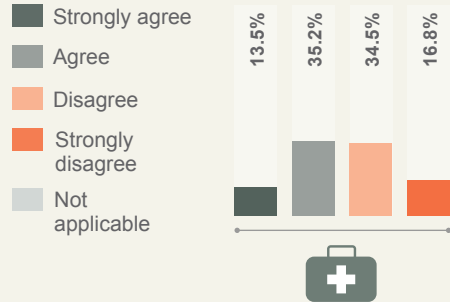
rangers

● Always ● Often ● Rarely ● Never

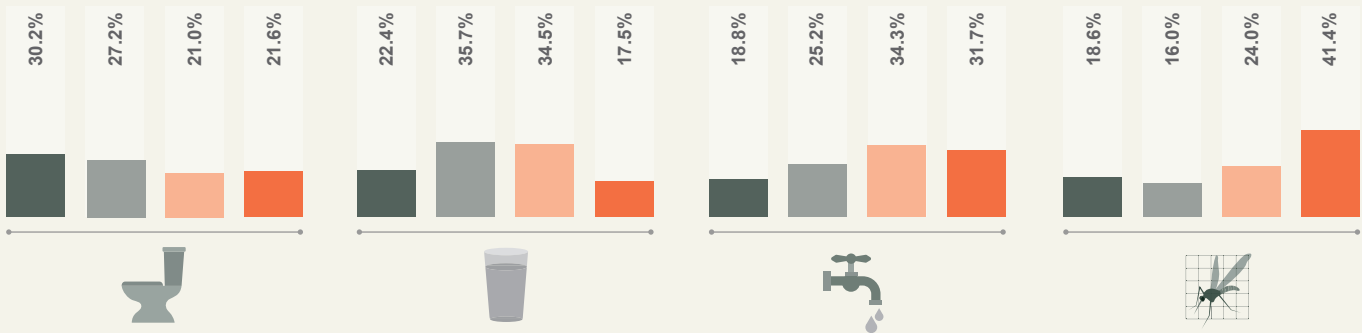
On patrol, I have access to



When needed the medical treatment I am provided is adequate

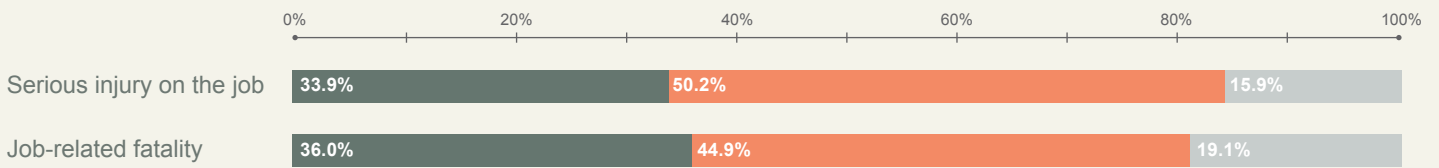


At outpost/station, I have access to



● Yes ● No ● Unsure

My employee insurance scheme provides compensation in case of



I have

IF YES...

I live with (in the conservation area)

82.2%
Spouse

77.8%
Children

37.1%
Spouse

33.1%
Children

Training

Strongly agree Agree Disagree Strongly disagree

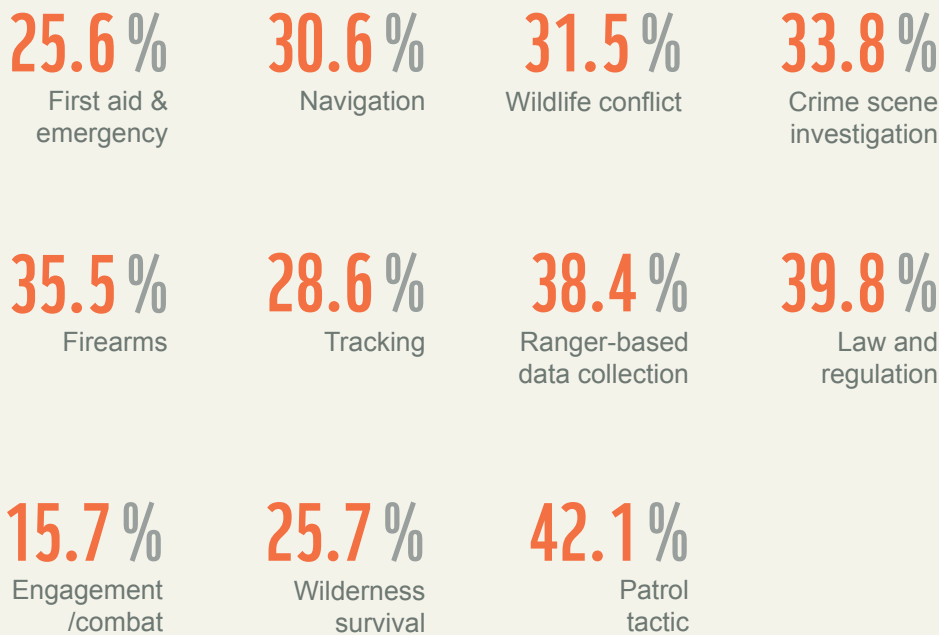
The training I received when I first started was sufficient for my job responsibilities



I feel that my organization provides sufficient additional training (such as refresher trainings)



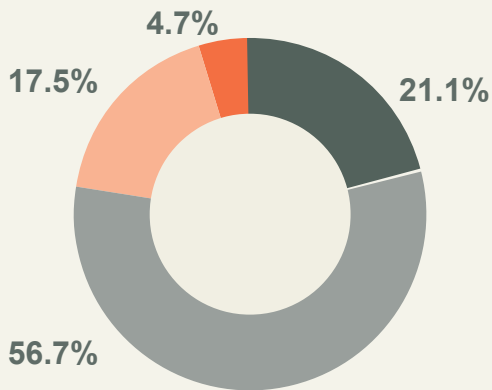
Within the past 12 months, I went to the following types of training to improve my skills



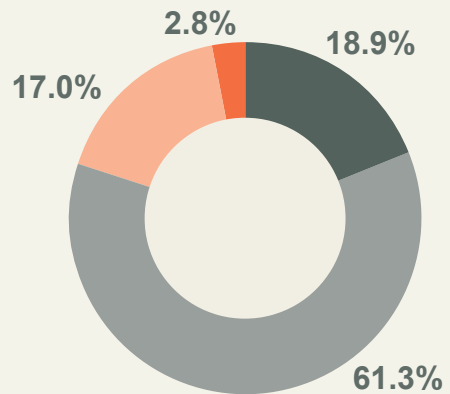
Community Relations

Strongly agree
 Agree
 Disagree
 Strongly disagree

I believe that part of rangers' success at their jobs depends on the community providing them with information



I believe community members trust me



The organization I work for shows concern for community members' well-being and quality of life



”
 THE LOCALS IN THE AREA UNDERSTAND ABOUT CONSERVATION. WE HAVE GOOD RELATIONS WITH THEM, AND WE HAVE NOT HAD ANY CONFLICT WITH THESE LOCALS TO THIS DAY
“

I am originally from a neighbouring community (within 20km of a park)

36.5%
Yes

Misconduct



Over the past 12 months, I was subjected to the following

■ While on duty

■ While off duty



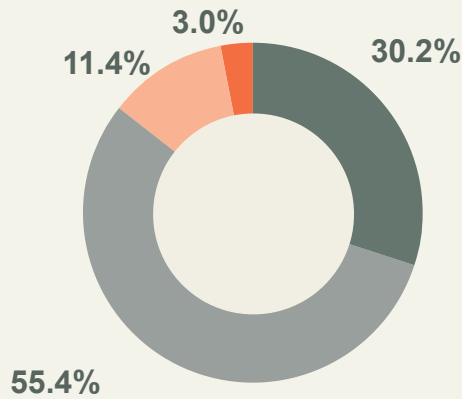
● Strongly agree

● Agree

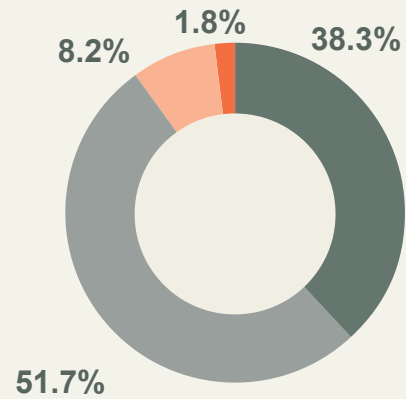
● Disagree

● Strongly disagree

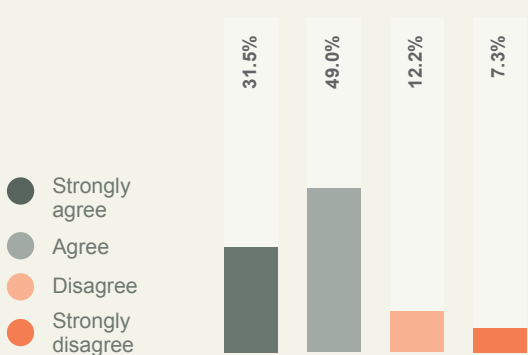
Rangers would report their fellow rangers if they witnessed them accepting a bribe or engage in other corrupt and illegal activities.



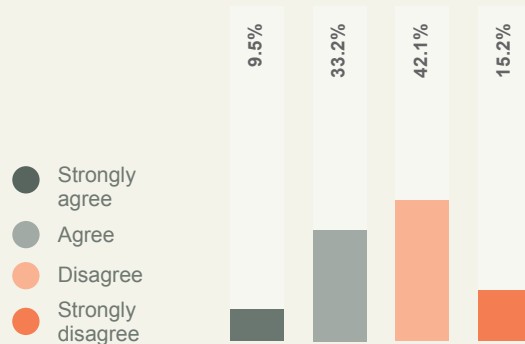
I would report a fellow ranger if I witnessed them accepting a bribe or other corrupt and illegal activities



My organization does a good job reprimanding rangers found to have participated in corrupt activities (such as accepting bribes)



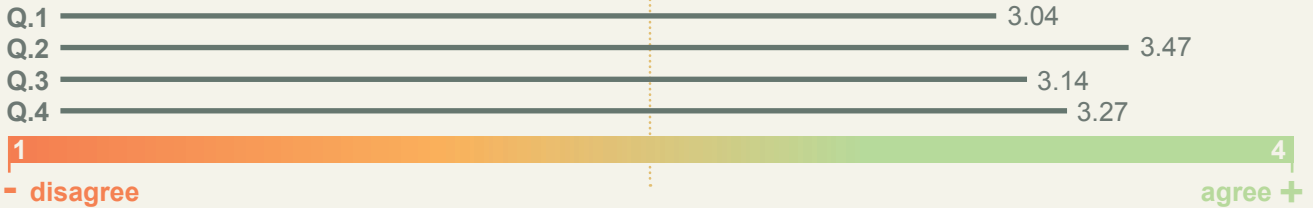
I would be concerned for my safety if I reported a fellow ranger who I witnessed accepting a bribe or engage in other corrupt and illegal activities



Other Questions

Section A: Relationships with Coworkers

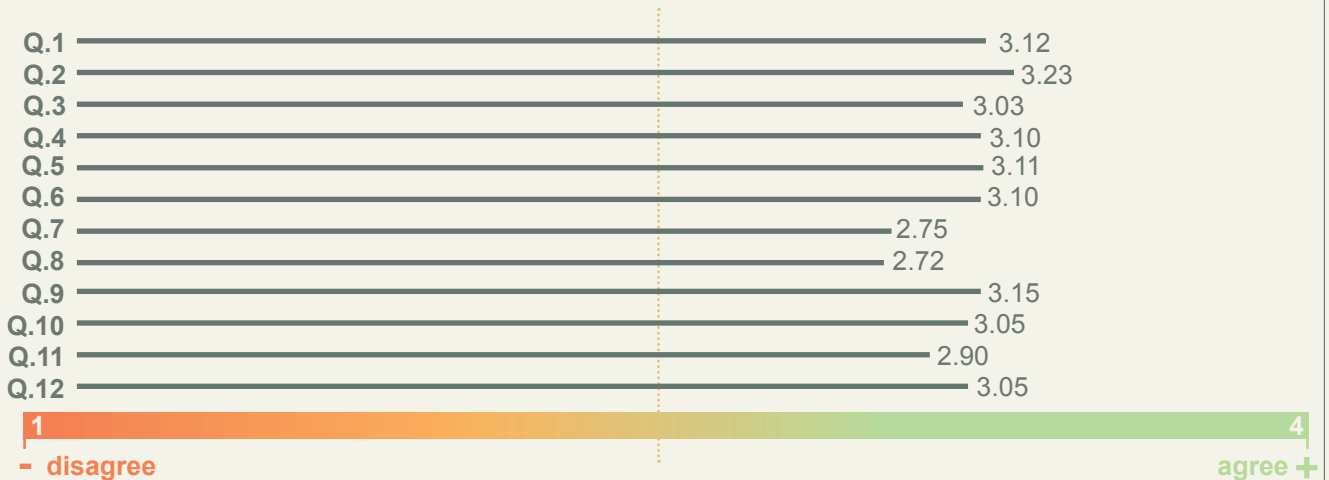
- Q.1 My fellow rangers appreciate what I do.
- Q.2 There is teamwork amongst the rangers.
- Q.3 I feel my colleagues would assist me in an emergency, even if helping me would put them at risk of serious injury or death.
- Q.4 I like the people I work with.



percentage positive response for this category **74.3%**

Section B: Relationship with managers and supervisors

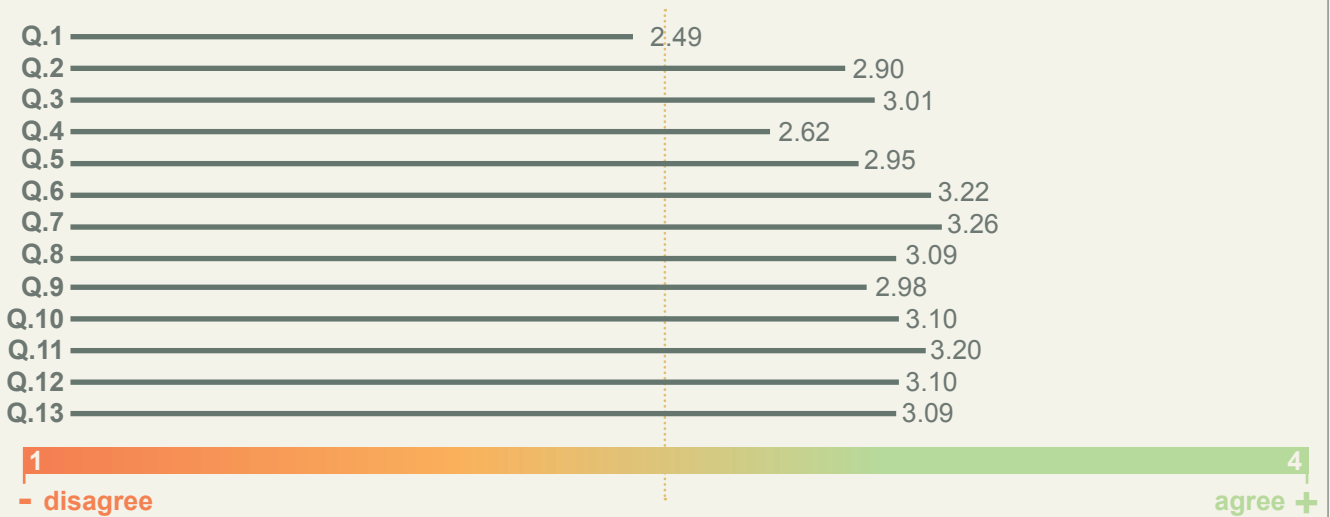
- Q.1 Clear planned goals and objectives are communicated to me by the management.
- Q.2 I receive feedback from management which helps me improve my performance.
- Q.3 I am familiar with my organization's policies for promotion and advancement.
- Q.4 I feel comfortable sharing my concerns with my supervisor.
- Q.5 I am given opportunities to learn and develop my abilities as a ranger by the organization I work for.
- Q.6 There is good communication between the supervisors and frontline staff.
- Q.7 I feel that the work I do is appreciated by my supervisors
- Q.8 My supervisor shows interest in the feelings of the frontline staff.
- Q.9 I believe that my supervisor treats me with respect.
- Q.10 My supervisor's decisions are usually equally fair to every ranger
- Q.11 My supervisor usually gives me an explanation for decisions that affect me.
- Q.12 I am not concerned that my supervisor could terminate my employment because he/she does not like me, even if my performance is good.



percentage positive response for this category **67.5%**

Section C: Relationship with local communities

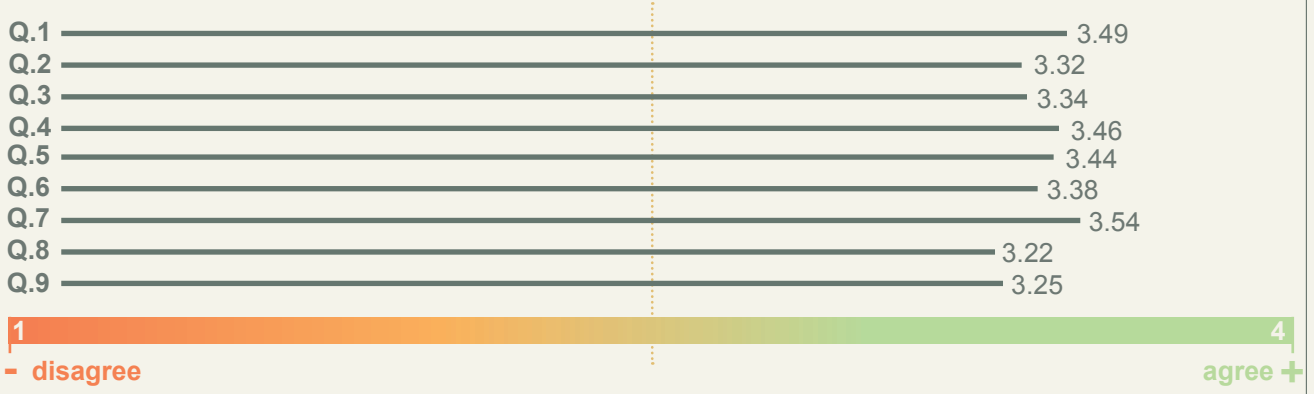
- Q.1 Community members do not pose a physical threat to rangers.
- Q.2 Community members do not see me as an enemy.
- Q.3 I believe community members respect me.
- Q.4 I feel that community members appreciate the work I do.
- Q.5 I feel that I represent the values of the local community.
- Q.6 I would be able to give good reasons to the community as to why my powers (such as powers to stop, search, and arrest) as a ranger are morally proper.
- Q.7 Rangers treat community members fairly.
- Q.8 Community members believe that the organization I work for has good intentions.
- Q.9 Community members believe that officers treat those they encounter with politeness and dignity.
- Q.10 Community members believe that rangers respect the rights of the people they come in contact with.
- Q.11 Community members believe that rangers make decisions based on facts, not personal interest.
- Q.12 Community members believe that rangers take the time to listen to people.
- Q.13 Community members believe that rangers allow people to express their views before making a decision in a situation.



percentage positive response for this category **66.7%**

Section D: Job satisfaction

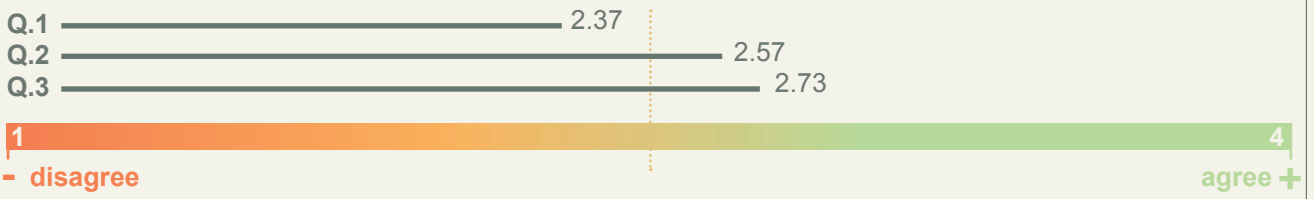
- Q.1 My job is important in accomplishing the goals of the organization I work for.
- Q.2 As a ranger, I believe I occupy a position of special importance.
- Q.3 I have confidence in the authority vested in me as a ranger.
- Q.4 I am proud of the work I do as a ranger.
- Q.5 I believe my role as a ranger is necessary to prevent crime.
- Q.6 Rangers are doing a good job of preventing illegal activities in the conservation area.
- Q.7 I am proud of my organization.
- Q.8 I like my job better than the average person in my country.
- Q.9 I feel satisfied with my job.



percentage positive response for this category **79.4%**

Section E: Job reward

- Q.1 I feel I am being paid a fair wage for the work I do.
- Q.2 I feel my efforts are satisfactorily rewarded by the organization the way they should be.
- Q.3 I am satisfied with my chances for promotion and advancement.



percentage positive response for this category **51.9%**

Section F: Physical and mental stress

How often do you feel:

- Q.1 ... tired?
- Q.2 ... physically exhausted?
- Q.3 ... emotionally exhausted?
- Q.4 ... worn out?
- Q.5 ... weak and susceptible to illness?
- Q.6 ... worn out at the end of the working day?
- Q.7 ... exhausted in the morning at the thought of another day at work?
- Q.8 ... that every working hour is tiring for you?
- Q.9 ... that you do not have enough energy for family and friends during leisure time?
- Q.10 ... that your work is emotionally exhausting?



percentage positive response for this category **69.2%**

Section G: Perception of legal-judicial system

Q.1 The laws and regulations of the conservation area are in line with the moral values of local community members.

Q.2 The laws and regulations of the conservation area are in line with the moral values of the general population.

Q.3 People who commit crimes in the conservation area are worried about the potential punishment they may receive if they are arrested.

Q.4 Laws protect everyone equally.

Q.5 People who are arrested in the conservation area are not treated too lightly by prosecutors.

Q.6 People who are arrested are not treated too lightly by judges.

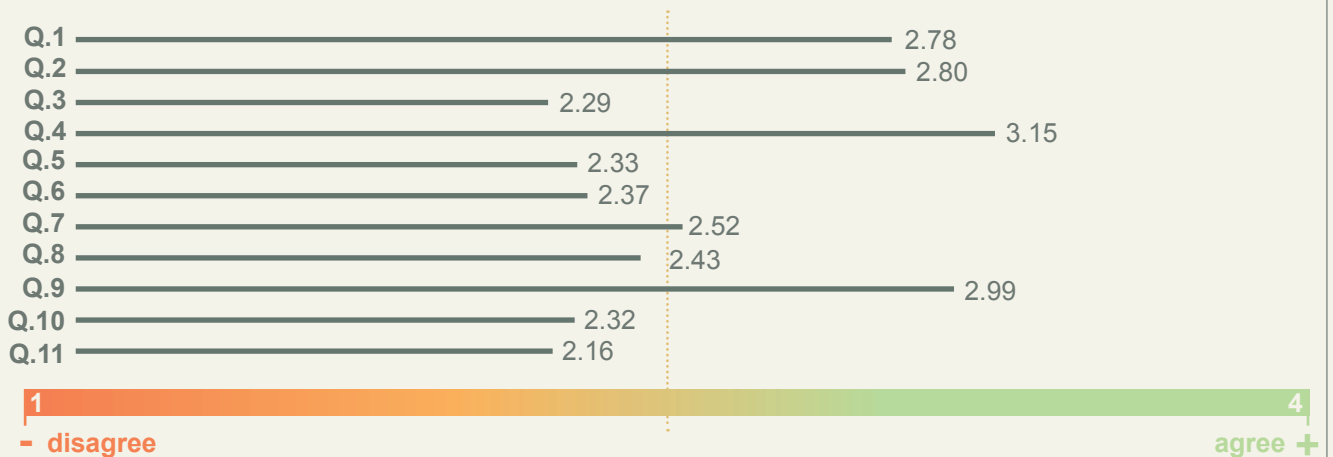
Q.7 The law does a good job deterring people from committing crimes within the conservation area.

Q.8 I am not disappointed with the way courts treat people arrested by rangers in the park.

Q.9 When a ranger arrests a person in the park, I trust the court to properly punish that offender.

Q.10 It is not true that people with money and power can get away with anything.

Q.11 It is not true that powerful people use laws to disadvantage powerless people.



percentage positive response for this category **51.9%**

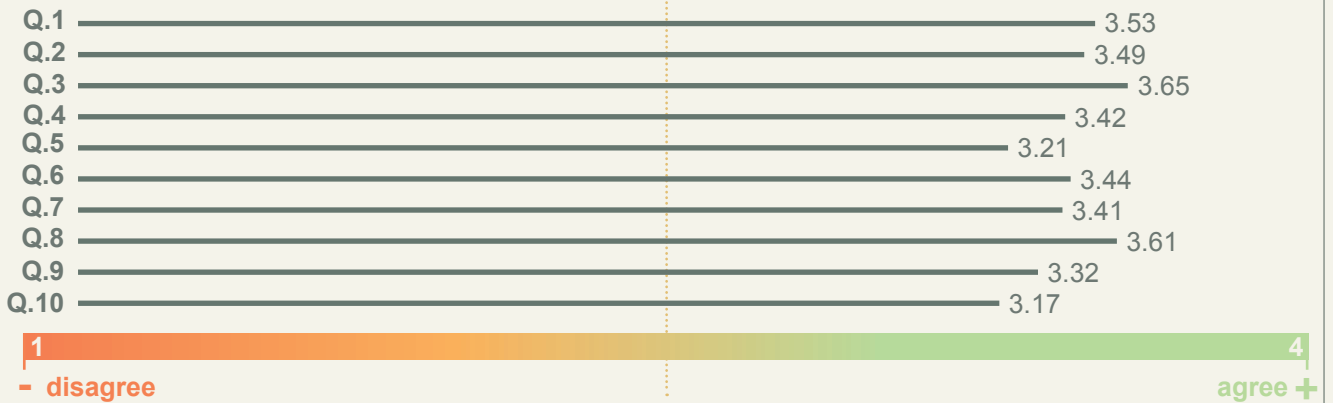
Section I: Attitudes on various misconduct activities

If a ranger were to do the following I think it would be a serious problem:

- Q.1 Accepting a bribe (such as money).
- Q.2 Poaching protected animals and/or plants for personal use.
- Q.3 Poaching protected animals and/or plants to sell for profit.
- Q.4 Drinking alcohol and/or illegal drugs while on duty
- Q.5 Leaving their post without notifying their supervisor

If a ranger were to do the following my coworkers would think it is a serious problem:

- Q.6 Accepting a bribe (such as money).
- Q.7 Poaching protected animals and/or plants for personal use.
- Q.8 Poaching protected animals and/or plants to sell for profit.
- Q.9 Drinking alcohol and/or illegal drugs while on duty
- Q.10 Leaving their post without notifying their supervisor



percentage positive response for this category **80.8 %**

Regional Comparisons

Further dividing survey responses by sub-regions reveals stark differences as to how rangers view their working conditions. Although this pattern does not hold across all categories, the findings below broadly show East Asian rangers reporting more favourable work conditions than Southeast Asian rangers, who in turn report better conditions than those rangers working in South Asia.

This pattern was seen in several important responses, including those on access to clean drinking water, access to communications devices, availability of overnight shelter, perception of the quality of available medical treatment, adequacy of initial training, and the ability to avoid injuries on the job.

Other questions showed alternative relationships between the three regions. For instance, South and Southeast Asian rangers faced violence and threats at work at similar levels, and far more frequently than East Asian rangers. On the issue of payment, Southeast Asian rangers were far less likely to have received their pay late than both East Asian and South Asian rangers.

When considering the figures below it is important to recognize that there is often considerable variation between those countries grouped together in a sub-region. That noted, these responses do speak to the reality that rangers working in different parts of the tigers' range are facing highly variable working conditions. This suggests that differing priorities for policy responses would be appropriate in different areas.



When I am on patrol overnight away from my main ranger base, I often or always sleep in the open (no shelter)



36.6 %
South Asia

26.3 %
Southeast Asia

14.0 %
East Asia

Average hours I work week

South Asia
83.6
hours

Southeast Asia
47.7
hours

East Asia
48.1
hours

When needed, the medical treatment that I am provided is adequate

South Asia
31.6 %

Southeast Asia
58.1 %

East Asia
87.3 %

In the last 12 months during work, I've experienced



Broken bone

6.2 %
South Asia

3.6 %
Southeast Asia

0.5 %
East Asia



Other serious injury

13.5 %
South Asia

9.4 %
Southeast Asia

3.8 %
East Asia

The job of being a ranger is dangerous due to the chance of encountering poachers



79.6 %
South Asia

90.6 %
Southeast Asia

90.2 %
East Asia

I often or always have access to clean drinking water



At outpost

34.7 %
South Asia

56.3 %
Southeast Asia

84.8 %
East Asia



Station

48.8 %
South Asia

61.7 %
Southeast Asia

84.8 %
East Asia

Regional Comparisons

I have employee insurance that provides compensation for



Serious on-job injury

32.4 %
South Asia

33.8 %
Southeast Asia

54.1 %
East Asia



Job-related fatality

38.9 %
South Asia

32.7 %
Southeast Asia

47.8 %
East Asia

The training I received when I first started was sufficient for my job responsibilities

South Asia
48.3 %

Southeast Asia
72.1 %

East Asia
84.2 %

The organization I work for shows concern for community members' wellbeing and quality of life

South Asia
87.1 %

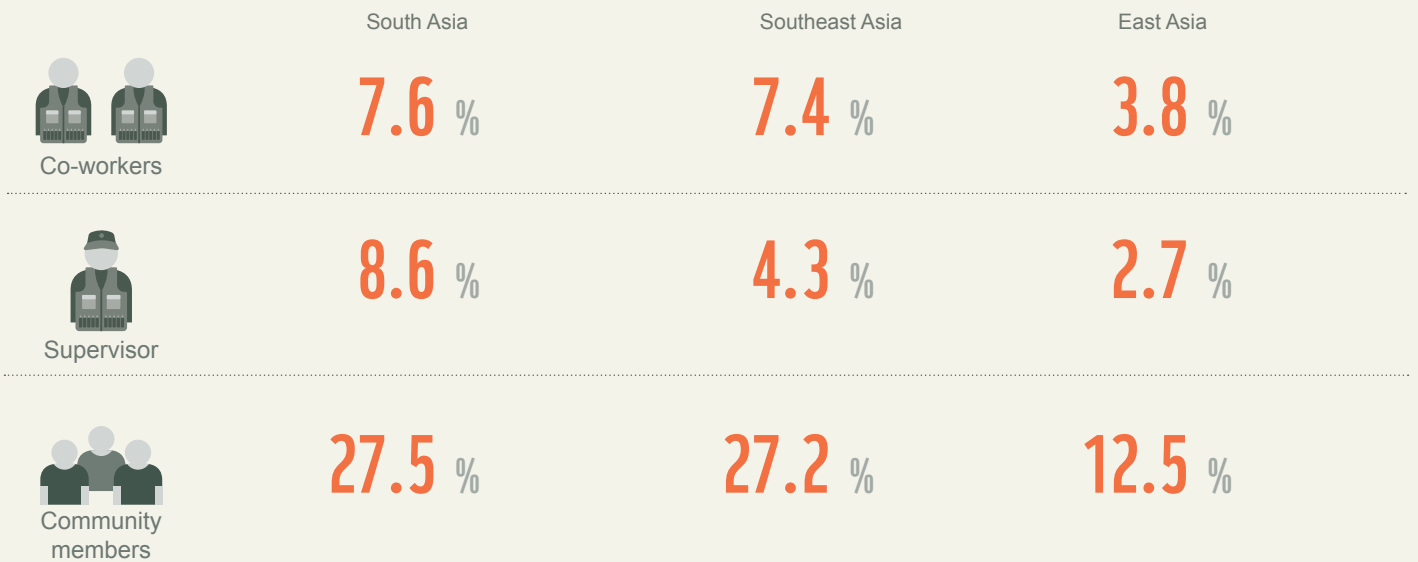
Southeast Asia
84.4 %

East Asia
81.5 %

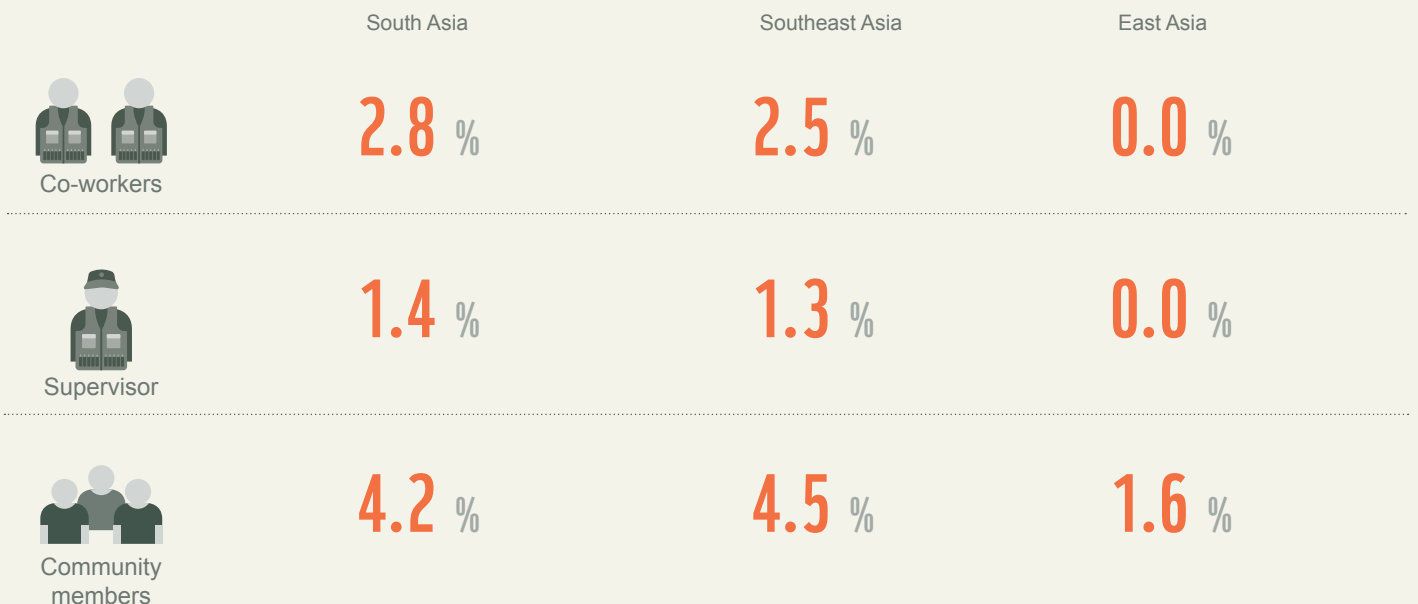


© Rohit Singh, WWF-US

Over the past 12-months, while on the job, I was subjected to threats by



Over the past 12-months, while on the job, I was subjected to physical violence by



Comparison of responses from tiger sites versus non-tiger sites in survey countries

Some might assume that rangers working to protect tigers and their ecosystems would be afforded with additional support and more favourable workplace conditions than those rangers working in other landscapes in their countries. The ranger survey project provides the opportunity to directly compare these two categories of rangers across eight tiger range countries – two others being excluded from this analysis due to insufficient sample size (Table 2).

In the graphs below, cases in which tiger landscape survey respondents in a given country had a more ‘negative’ average response than non-tiger rangers (e.g., more late pay, less access to sick leave, etc.) are designated with a negative score and orange bar. Conversely, more ‘positive’ in-country responses for tiger landscape rangers (e.g., less late pay, more access to sick leave) is indicated by a positive number and blue bar. Individual countries are not specified by name due to lack of permissions to publish this information for all countries.

Across 23 questions, in only four cases were ‘ranger’ conservation area responses more frequently positive than ‘non-ranger’ responses. In 12 cases the opposite was true, with tiger site rangers providing more negative responses to a given question in the majority of countries.

Of particular note, in comparison to non-tiger landscape rangers, ‘tiger’ rangers were:

- significantly less likely to believe they were paid a fair wage for the work they do.
- far less likely to have access to paid sick leave.
- more likely to sleep without shelter when on overnight patrols.
- more often lacking access to clean drinking water on patrol.
- less likely to be insured in case of a serious on the job injury.

Country	Number of rangers surveyed in tiger conservation areas	Number of rangers surveyed in non-tiger conservation areas
Bangladesh	62	74
Bhutan	51	3
[not included in analysis]		[insufficient sample size]
India	571	196
Nepal	116	79
Indonesia	297	445
Malaysia	102	120
Myanmar	17	88
Thailand	199	210
China	98	99
Russia	86	10
[not included in analysis]		[insufficient sample size]

Table 2: Number of rangers surveyed both within and external to tiger landscapes in each of the 10 countries with extant tiger populations.

In a few cases ‘tiger’ rangers reported better conditions than non-tiger rangers in a majority of countries. For example, they were:

- far less likely to have been subjected to an incident of physical violence while on the job.
- significantly more optimistic about their chances of promotion or advancement in their workplace.

These findings are in line with a previous assessment in the global ranger survey analysis (*Life on the Frontline 2019: A Global Survey of Ranger Working Conditions*) showing that rangers working in World Heritage Sites (WHS) often faced more challenging employment

conditions than non-WHS rangers across similar indicators within countries. Even if other factors are at play, such as greater employee expectations in well-known conservation sites, a number of the objective findings (e.g., less insurance coverage and clean water access in both types) show that a higher profile does not necessarily correlate with better employment conditions or support for rangers.

Given the cultural, ecological, and economic importance of tiger sites, they should be considered priority targets for new programs or trial efforts to improve ranger welfare and effectiveness.

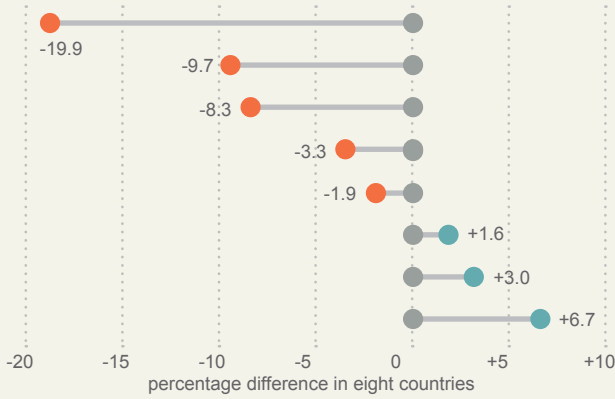


© Hkun Lat, WWF-Australia

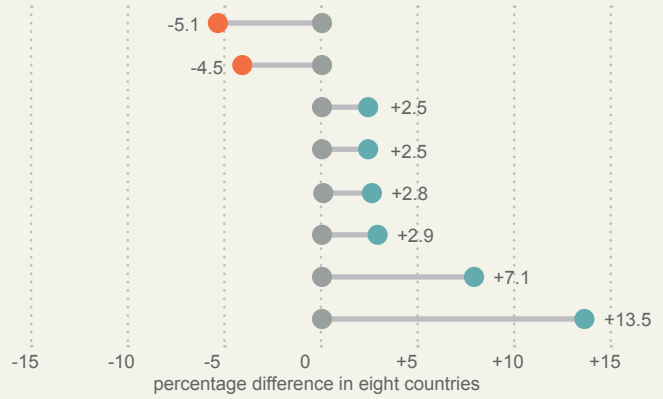
Tiger Landscape Ranger Survey

- tiger landscape rangers response more negative (worse conditions)
- tiger landscape rangers response more positive (better conditions)

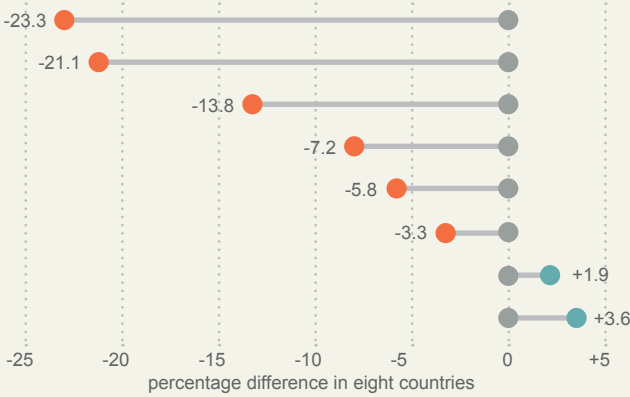
I am paid a fair wage



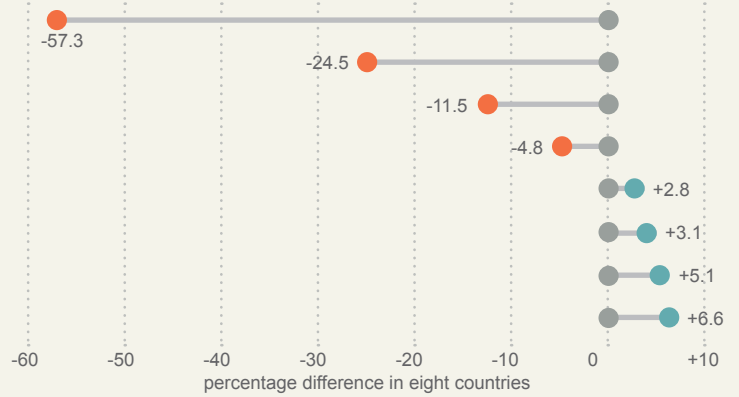
I am satisfied with my chances for promotion and advancement



I have paid sick leave

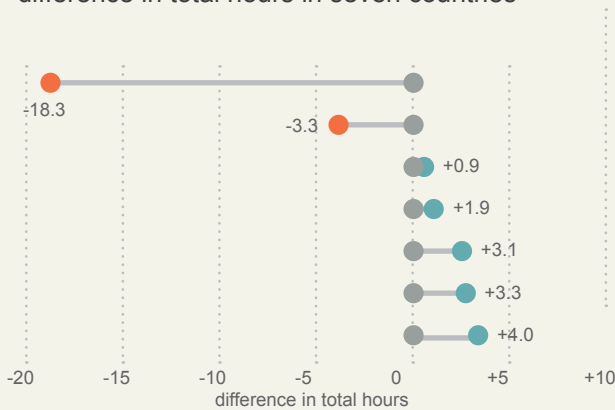


I was paid late at least once in the last 12 months

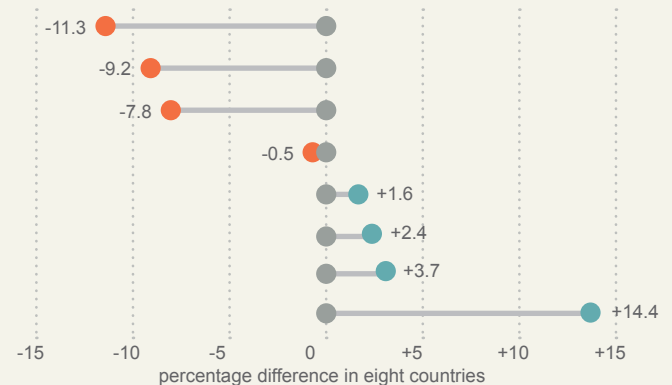


Average hours worked per week

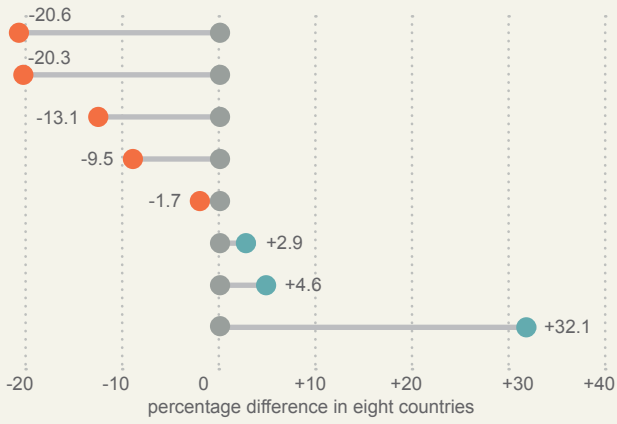
*difference in total hours in seven countries



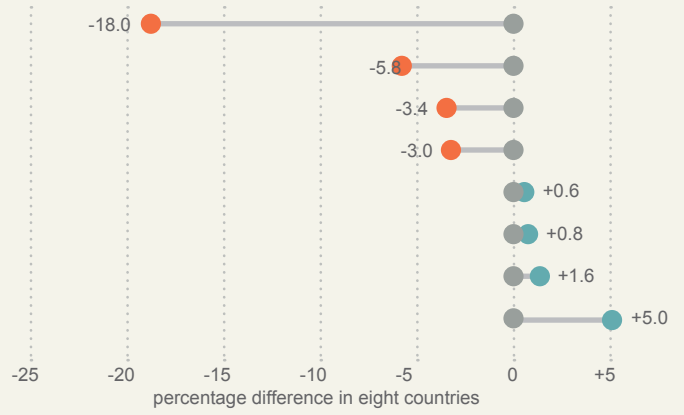
I often or always have access to communication devices on patrol



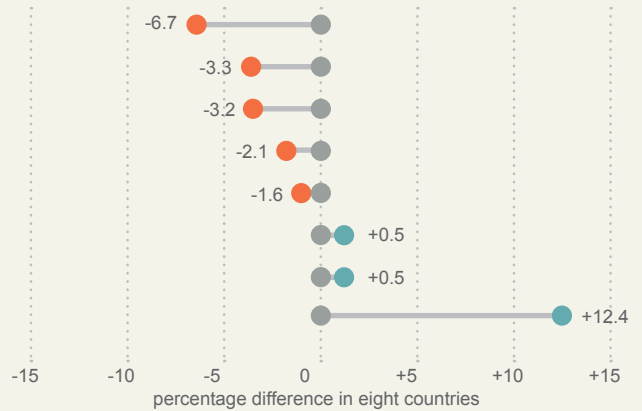
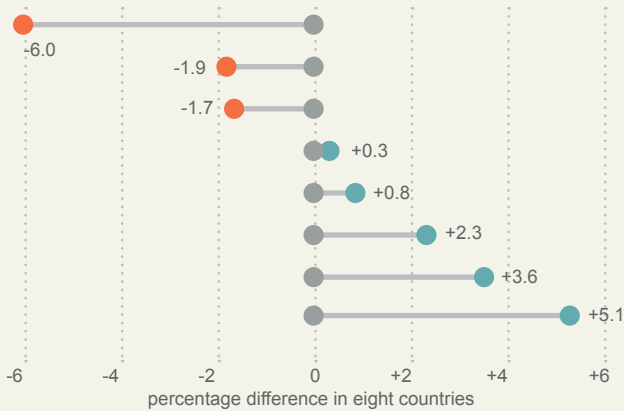
When I am on patrol overnight away from my main ranger base, I often or always sleep in the open (no shelter)



The job of being a ranger is dangerous due to the chance of encountering poachers



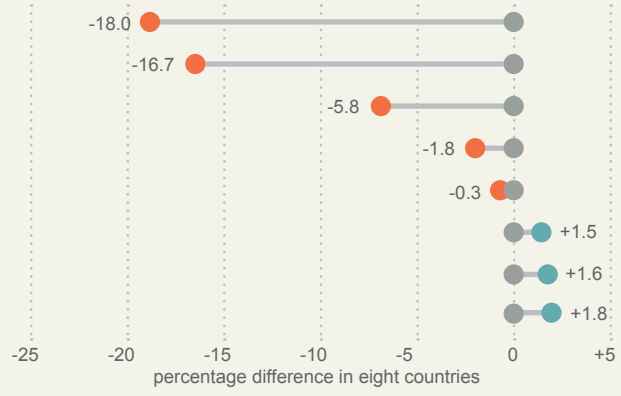
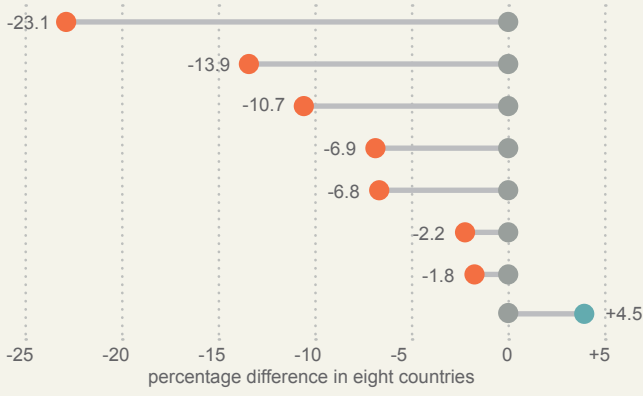
In the last 12 months during work, I've experienced a broken bone or serious injury at work



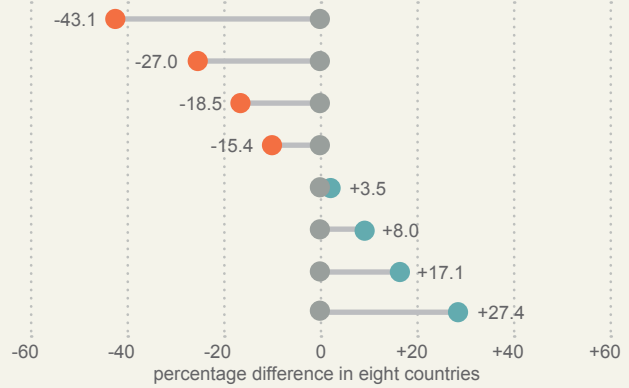
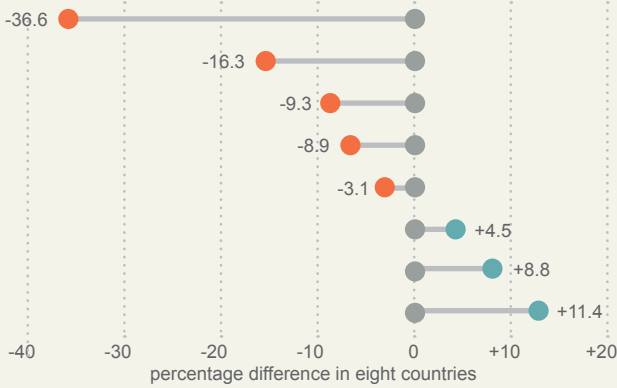
Tiger Landscape Ranger Survey

- tiger landscape rangers response more negative (worse conditions)
- tiger landscape rangers response more positive (better conditions)

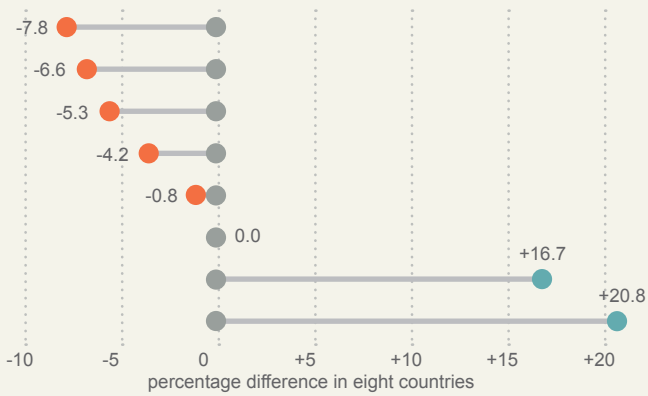
I often or always have access to clean drinking water on patrol or at outposts



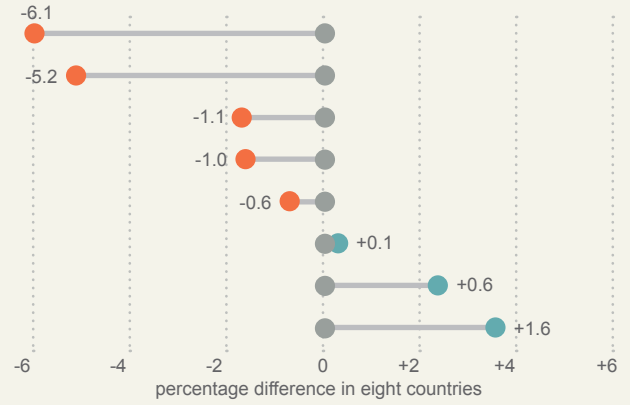
I have employee insurance that provides compensation for serious on-job injury or death



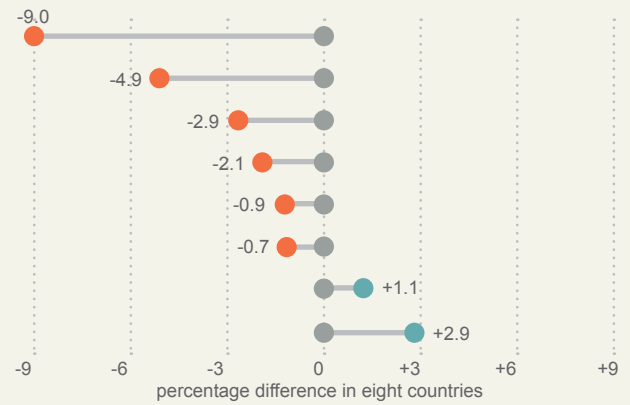
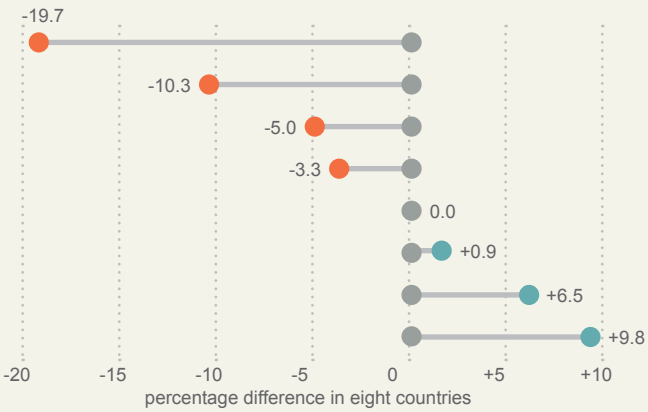
When needed, the medical treatment I am provided is adequate



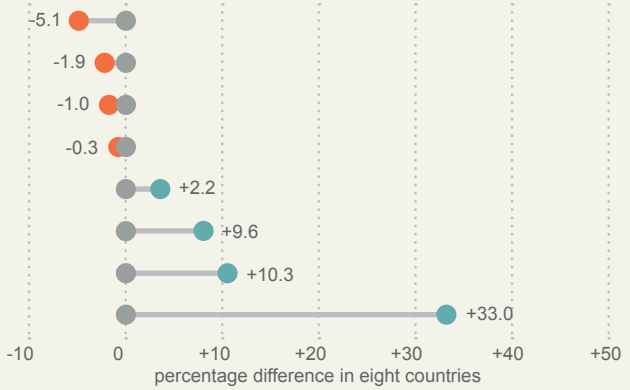
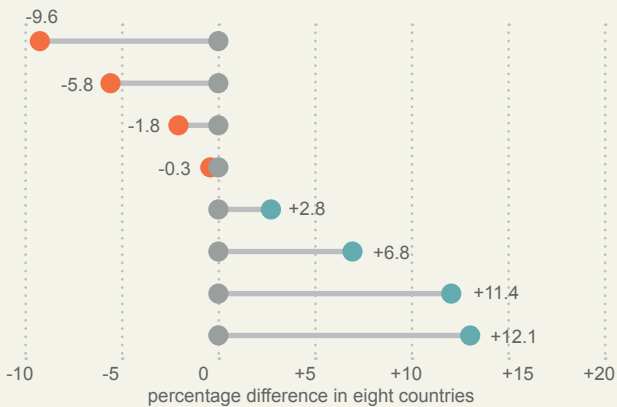
Over the past 12-months, while on the job, I was subjected to threats by



The training I received when I first started was sufficient for my job responsibilities

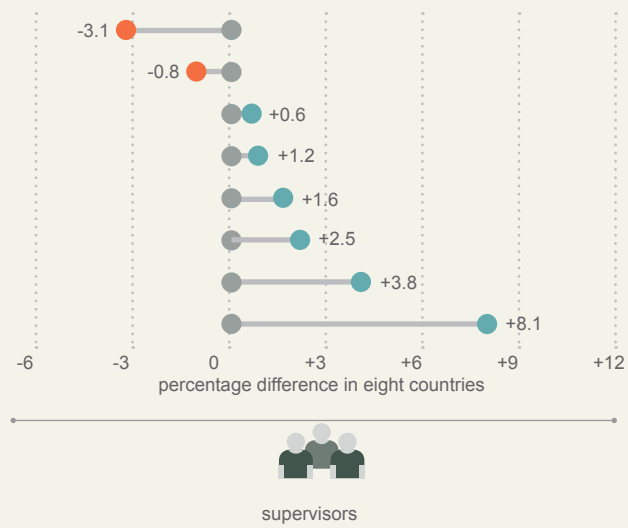
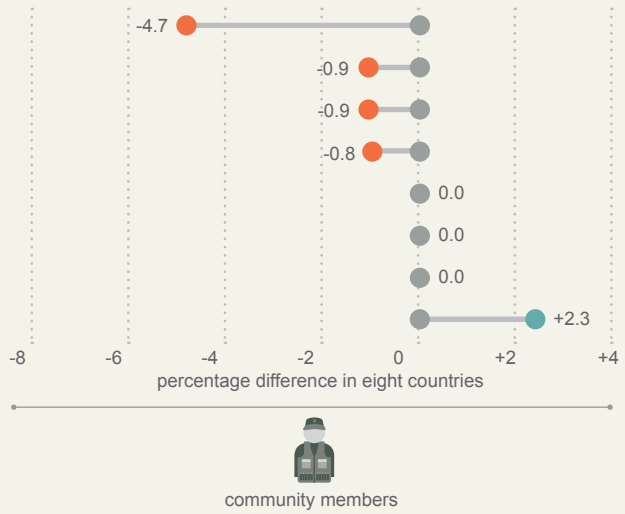
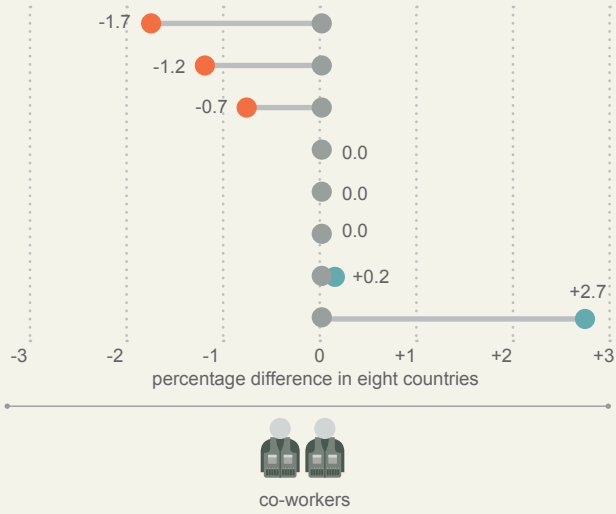


The organization I work for shows concern for community members' wellbeing and quality of life



- tiger landscape rangers response more negative (worse conditions)
- tiger landscape rangers response more positive (better conditions)

Over the past 12-months, while on the job, I was subjected to physical violence by



I Ranger Densities

While assessing the ranger welfare issues addressed throughout this in this report, it is important not to overlook the great importance of patrol ranger density in tiger conservation landscapes. It is not only a major factor impacting the likelihood of success in achieving species protection goals, but also often key towards improving ranger safety.

The appropriate patrol ranger density for a given site will depend on a variety of factors, including levels of threat, remoteness, terrain, and patrol frequency, among others. Recently published guidance has suggested different ideal densities:

- 2-10 rangers per 100km² depending on the intensity of the poaching threat¹.
- 20 rangers per 100km² for public protected areas².

With perhaps the exception of the most remote areas of the Northeastern range of the tiger, it would be fair to categorize poaching pressures on this species as incredibly high. Considering this in relation to the guidance above, it seems appropriate to suggest that in the case of tiger conservation areas, patrol ranger densities should be at minimum 10 rangers per 100km².

The below table (Table 3) shows estimates for total patrol ranger numbers across eight of ten extant tiger countries. It suggests that many countries - particularly many Southeast Asian countries - likely have ranger densities considerably

lower than 10 per 100km² in some tiger landscapes. Although this seems highly probable, the figures in Table 3 should not be treated as definitive, for several reasons:

- The numbers are estimates derived from discussions with experts and government officials, rather than reference to official published figures of patrol ranger numbers.
- The estimates were collected between 2017-2019 and may not reflect current staffing numbers.
- These density estimates are country wide. In many tiger range countries patrol densities could be significantly higher in tiger landscapes than in other protected areas.
- The figures are for public sector patrol rangers only. The presence of other rangers working outside this designation (e.g., certain community rangers, private sector rangers, etc.) will thus be overlooked in this analysis.

Given the importance of ranger presence to safeguarding the world's remaining tiger populations, tiger range countries should elevate the issue of ranger densities both nationally and through the Global Tiger Initiative. This could include setting targets for ranger densities, be it through national strategies and budgets, or as commitments to larger processes (e.g. Southeast Asia Tiger Recovery Action Plan, contributions to Convention on Biological Diversity targets, etc.). Such actions are particularly important in tiger range countries that have seen declines in wild tiger populations in recent years.

Country	Total public sector patrol rangers - country-wide estimate ³	Public sector patrol ranger density ⁴ estimate (country-wide), per 100 square kilometers
Bangladesh	820	12.1
Bhutan	1,500	8.1
India	60,000	30.4
Nepal	2,262	6.0
Indonesia	5,604	2.4
Malaysia	1,408	2.2
Myanmar	412	1.0
Thailand	5,220	5.4

Table 3: Estimated number of public sector patrol rangers working across eight tiger range countries, and estimated country-wide patrol density average when comparing that figure against total terrestrial protected areas coverage.

1 Henson, D.W., Malpas, R.C. and D'Udine, F.A., 2016. Wildlife law enforcement in Sub-Saharan African protected areas—a review of best practices. *Occasional Paper of the IUCN Species Survival Commission*, 58.

2 IUCN, 2016. *WCC-2016-Rec-103-EN Establishment, recognition and regulation of the career of park ranger*

3 Estimates of total ranger numbers taken from *Life on the Frontlines: A Global Survey of the Working Conditions of Rangers (2019)*. Those figures are unofficial and were derived from inquiries made with various experts and officials across those countries.

4 Calculated by reference to *Protected Planet (figures for total terrestrial protected area coverage by country, in 2018)*

I Recommendations

Given their critical role in safeguarding tigers, valuable natural resources, and ecosystem services, rangers should be fully professionalized and supported in a manner commensurate to that of a sector mandated to uphold the rule of law in the countries in which they work.

To accomplish this, tiger range governments should:

- Comprehensively analyze the ranger survey results from their country and use them in the drafting of strategies and policies that improve ranger welfare and effectiveness. These findings should also be used to leverage more resources for rangers, and to better allocate existing funds. Countries can approach WWF and direct them to undertake further analysis of their national level findings as they see fit.
- Initiate new research on rangers and implement a plan for tracking important ranger-related indicators and statistics at regular intervals.
- Engage with the United Ranger Support Alliance (URSA) to implement or adopt standards, tools or guidance around the professionalization of rangers that will be developed through that partnership.
- Comprehensively review and then improve ranger training curricula, with particular attention to training in areas that may improve ranger on-job safety. At the same time, move to strengthen ranger training institutions.
- Establish processes that build dialogue and trust between rangers and the local peoples they will encounter during their work. Further to this, seek to engage local peoples with both career and citizen science opportunities pertinent to the ranger profession.
- Adopt policies and processes that ensure the safety of those rangers who would report colleagues for illegal or corrupt activities.
- * Guarantee access to basic necessities, including adequate shelter, boots and clothing, as well as clean drinking water.
- * Improve the availability and quality of emergency medical care and reducing response time in delivering qualified medical attention to injured rangers in the field.
- * Provide insurance coverage for serious injury or death to all rangers and ensure that this coverage is to a living wage.
- * Greatly expand ranger access to communications technology when they patrol. This means guaranteeing that a suitable communication network is in place, and that rangers always have access to a communication device that is appropriate to local conditions.
- * Introduce dedicated programs to support the mental health of rangers, particularly in light of the high stress environments in which they often work.
- * Undertake efforts to make ranger workforces more representative of the broader public, particularly through efforts to recruit and employ more female and non-binary rangers, as well as those from ethnic minority and indigenous populations.

Take serious efforts to quickly increase ranger densities in tiger landscapes, by:

- Assessing and publishing patrol ranger numbers and densities across all tiger conservation areas at regular intervals.
- Formalizing a strategy to increase patrol ranger densities to at least 10 rangers per 100 square kilometers in all tiger conservation areas where the species is susceptible to considerable poaching pressures. This is particularly important in Southeast Asia, where tigers are most threatened, and current ranger densities appear to be lower.
- Empowering and supporting indigenous and local community groups to undertake patrolling activities in coordination with the government.
- Adopting time-bound goals for increasing ranger densities in tiger landscapes as an element of the second phase of the Global Tiger Initiative (2022-2034).





 WWF	Working to sustain the natural world for people and wildlife together possible <small>™</small> panda.org
---	--

© 1986 Panda symbol WWF – World Wide Fund For Nature (Formerly World Wild life Fund)
© "WWF" is a WWF Registered Trademark. WWF, Rue Mauverney 28, 1196 Gland, Switzerland
Tel. +41 22 364 9111 Fax +41 22 364 0332. For contact details and further information,
please visit our international website at www.panda.org