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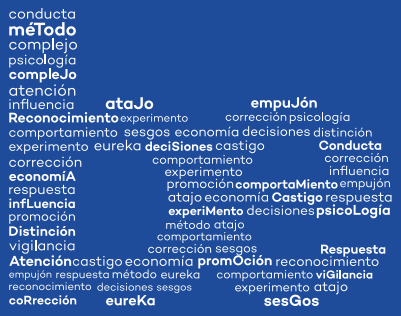

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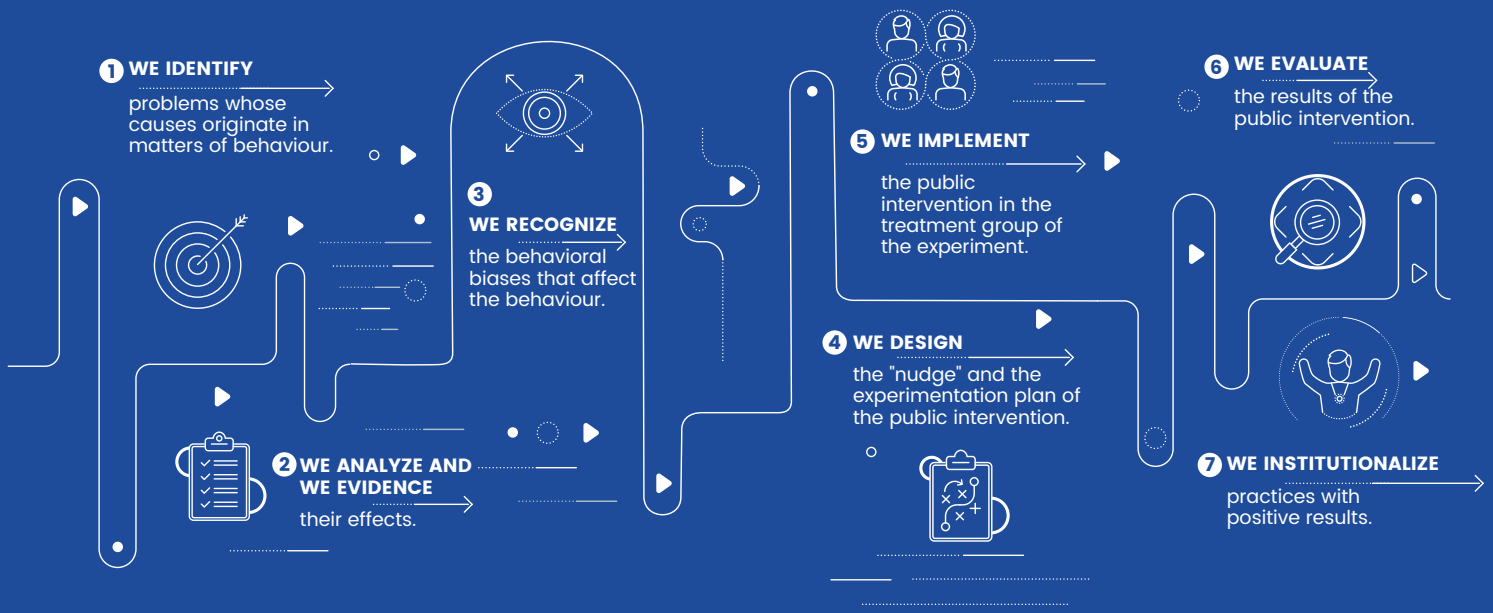

Behavioral economics

applied to environmental enforcement

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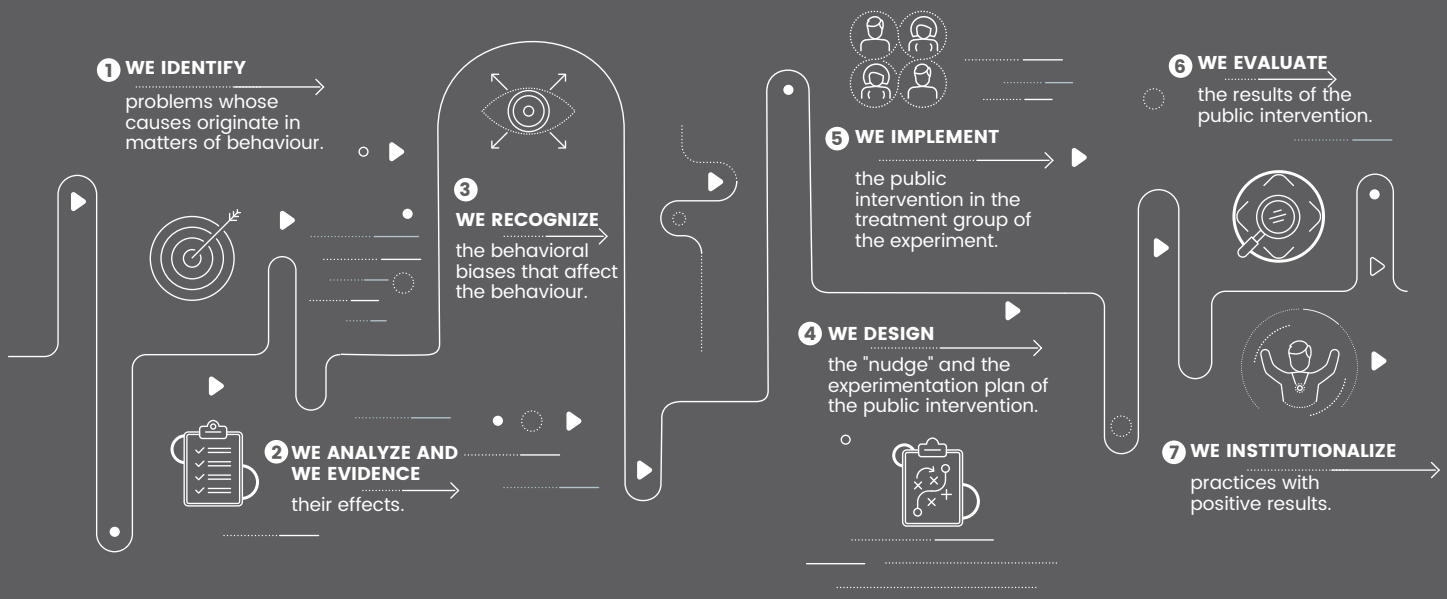
Oefa



Behavioral economics

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Av. Faustino Sánchez Carrión Nos. 603, 607 y 615 Jesús María, Lima, Perú.
Phone number: (51-1) 204-9900
Webmaster: webmaster@oefa.gob.pe
Website: www.oefa.gob.pe
Follow us on:

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Introduction

Behavioral economics is a branch of economics that is in increasing development. It recognizes that people make decisions based on emotional, psychological and social issues; in contrast to traditional economics, which considers market agents are rational subjects who make decisions with complete information, always seeking to maximize their utility. Various studies show that human beings have cognitive biases that drive our decisions, sometimes automatically, intuitively and focusing mainly on the present (Kahneman & Tversky, Prospect Theory: An Analysis of Decision under Risk, 1979), (Kahneman, Pensar fast, think slow, 2012).

Behavioral economics is recognized in many countries as an important factor when designing and implementing public policies. For this reason, in 2018, the Senior Management of the Environmental Assessment and Enforcement Agency (OEFA, by it´s acronym in Spanish) promoted a project that included these tools to improve problems related to environmental enforcement. Thus, with General Management Resolution No. 071-2018-OEFA / GEG, the working group called "Behavioral Economics" (BE OEFA) was created, whose objective is to identify and analyze problems raised in the development of activities and functions associated with environmental enforcement to propose alternative solutions through neuroscience, psychology and behavioral economics tools. BE OEFA is made up of professionals from different disciplines.

To start the project, five situations were identified that could serve as a first experience with behavioral sciences. Each situation was assigned to a work team, under the strategy that the teams would search for evidence of the problem, perform the data analysis and pose the research problem under the behavioral economy approach. This revealed the following problems:

1. More than 60% of environmental complaints referred by the OEFA to public entities remained unanswered, and the complaints handled took an average of 71 days to be answered.
2. Only 5.8% of those administered participated in the inventory of good environmental practices.
3. The rate of recognition of responsibility for non-compliance of environmental obligations by the companies was only 1.4%.
4. Of 619 environmental non-compliances detected in the supervision stage, only 9% were corrected, despite the existence of benefits in the event of correction.
5. The level of attention received by the calls from the Academy of Environmental Enforcement (AFA, by it´s acronym in Spanish) was only 10.6%.

An analysis of the causes that originated each of these problems was carried out and it was detected that there was a series of behaviors that could be explained by the presence of cognitive biases. The most frequent cognitive biases in the problems evidenced were:

a. The bias of the status quo; in other words, human beings usually decide to leave things as they are because "that's how they are fine", avoiding changes.
b. Due to the "carry-over effect", people tend to behave like the majority.
c. The "preference for the present" or "hyperbolic discount" bias shows that individuals have a preference for the immediate present, minimizing future consequences, even if they are negative.

With the evidence of the problems and the verification of the biases and heuristics of the behavior, each group proposed a specific intervention to encourage and promote the behavior towards what is desired: greater attention to complaints, greater correction of non-compliance and participation in academic activities, among others.

As can be seen in this publication, each team proposed their intervention strategies, trying to generate incentives in the recipients of the intervention, facilitating the response and providing feedback on their performance.

With these aspects clear, experimentation began in the first half of 2019. The methodology of quantitative scientific research was used to measure the impact of each project, working with control and treatment groups. The results obtained after the experimentation were positive in all cases, as the indicators of the problems addressed improved as follows:

1. The response rate to environmental complaints transferred by the OEFA to other public entities increased from 36% to 86%; and the respond time decreased from 71 to 22 business days.
2. The response provided to the OEFA for the inventory of good environmental practices increased from 5.8% to 32.3%.
3. The rate of recognition of responsibility for non-compliance of environmental obligations was only 1.4%. After the intervention, recognition rates increased differently by subsector, reaching 35% in the mining sector, 15% in electricity, and 12% in the fisheries sector.
4. The non-compliances corrected in the mining sector increased from 8.3% to 40.6%, to the benefit not only of the administered companies and the OEFA, but also the environment.
5. The level of attention of the AFA calls increased from 10.6% to 34.1%

This shows that the application of behavioral economics tools has a significant degree of effectiveness at minimal cost, since it was not necessary to invest additional resources to achieve the impact. That is why the 2020 edition of the Award for Good Practices in Public Management, organized by the NGO Ciudadanos al Día, awarded the Special Award for Public Innovation to BE OEFA.

In this publication we share with you the results of this experience, hoping to contribute to the knowledge of this growing discipline: behavioral economics.

Karina Montes Tapia
President of BE OEFA

BE OEFA FIRST PORTFOLIO OF INTERVENTIONS

A response for the environment: actions to improve the response rate to environmental complaints

What was the problem?

A low response rate to the transfers of environmental complaints made by OEFA to other public entities was detected.

36% response rate

71 days of care

Why are they not responding?

- **Social norm:** *"No one responds to these documents".*
- **Distraction:** *"It is not important".*
- **I relegate:** *"I have other things to do".*
- ***Status quo:*** *"This is never going to change".*

We did?

We change the logic with which it is they sent the documents.

How was the intervention?

13 Environmental Enforcement Entities (EFA, by it´s acronym in Spanish) with national scope.

3 2 treatment and 1 control.

7 months of intervention.

What do we achieve?

139% of increase in answers.

69% reduction of weather.

36% to **86% increase** in the response rate.

Average response time **decreased** from **71** to **22** business days.

How it was made?

More relevant

Use of visual tools in the communications with the EFA to draw their attention.

More attractive

Motivation to EFA with information from their peers and feedback on their performance.

Easier

Implementation of the form quick response to simplify process.

A response for the environment: actions to improve the response rate to environmental complaints

Gustavo Cuellar Mendoza, Andres Dimas Beisaga, Dante Guerrero Barreto,
Karina Montes Tapia, Lucía Robledo Martínez, Manuel Santa Cruz Santa Cruz

August, 2020

1. Description of the problem and intervention recipients

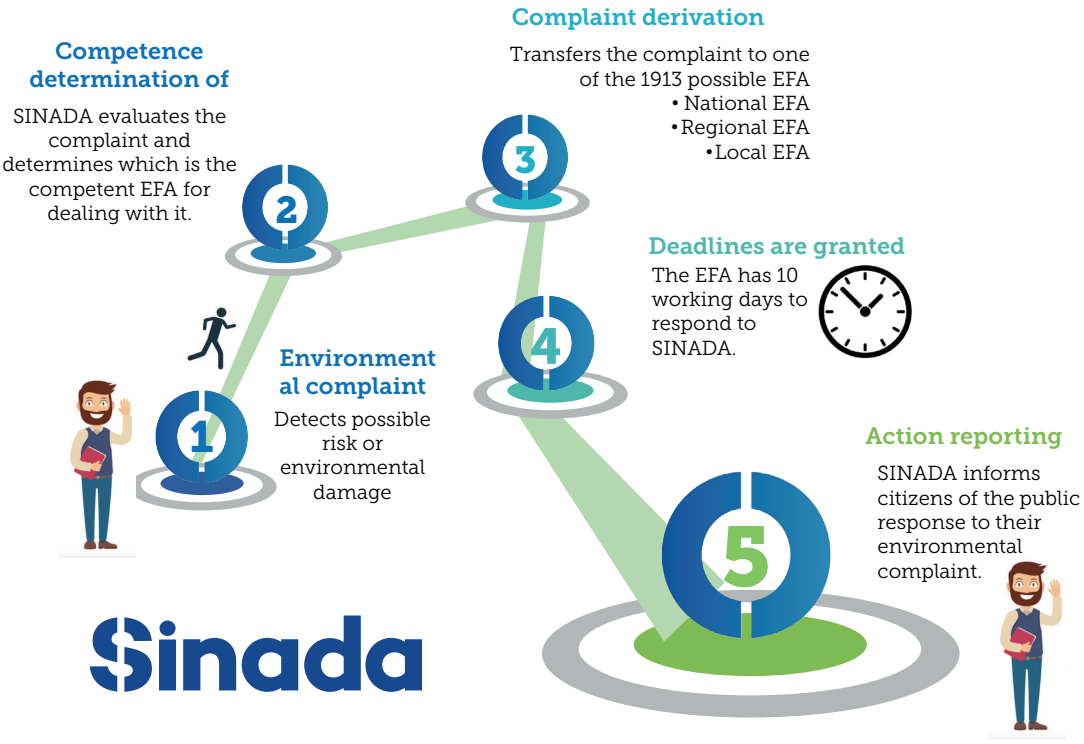
1.1. General context

All human activities can affect the environment in which we live, and in the face of a possible risk or environmental damage evidence, citizens can file complaints with the various public entities responsible for acting to protect the environment.

CIn order to facilitate citizens submission of environmental complaints, the Environmental Assessment and Control Agency (OEFA, by its acronym in Spanish) – in its capacity as governing body of the National Environmental Assessment and Control System (Sinefa, by its acronym in Spanish) – makes available to the public the National Information and Environmental Complaints Service (Sinada, by its acronym in Spanish).

Sinada operates as a channel that connects citizen complaints with Environmental Control Entities (EFA, , by its acronym in Spanish), which according to their competencies can be: ministries, specialized technical agencies nationwide, regional and local governments (provincial and district municipalities), and even OEFA itself, in the subjects whose environmental enforcement has been transferred[1].

Diagram 1
Environmental complaint response scheme with SINADA-OEFA



1. Until July 2020, the activities whose environmental control had been transferred to the OEFA are large and medium mining, electricity, hydrocarbons, industrial fishing, manufacturing industry, internal trade, solid waste (infrastructure and degraded areas) and agriculture.

EFA are called upon to execute actions to promote compliance upon their managed, and to respond to identified environmental problems.

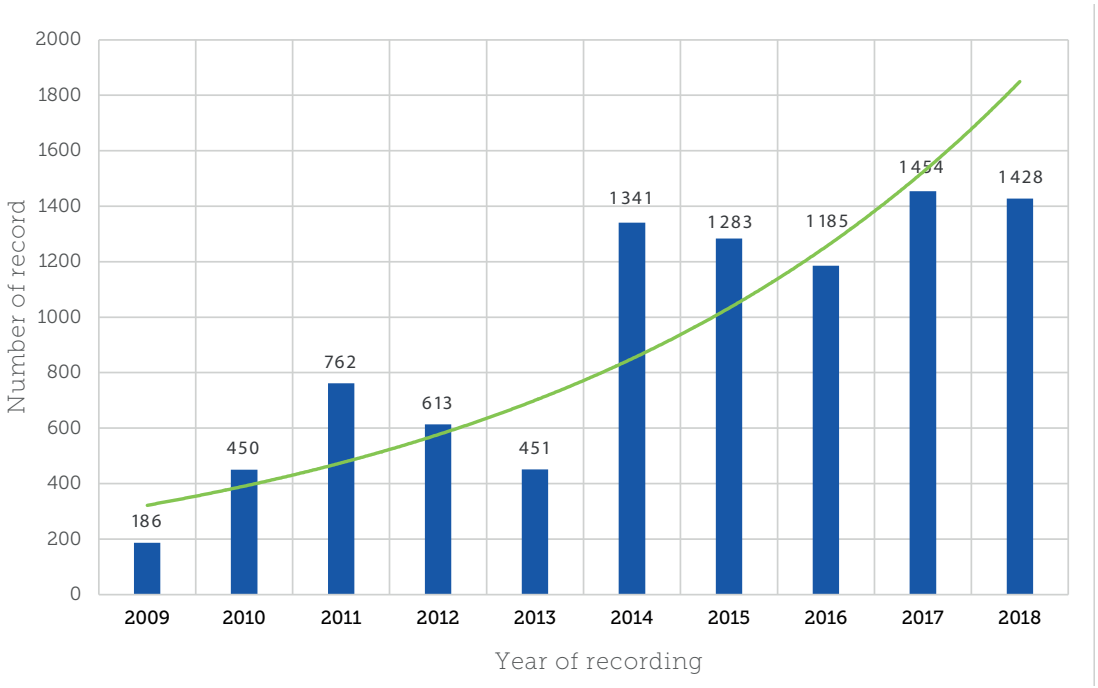
As shown in Diagram N.° 1, although environmental complaints enter directly to the OEFA, they could be related to another EFA matters of competence, wich is why the complaint must be referred to the entity or entities that have the competence to deal with the situation reported by the citizen.

Success in responding stems from timely responses that may be provided by the responsible EFA.

1.2. The problem in numbers

Between 2009 and 2018, Sinada transferred 9,153 complaints to different EFA according to their competencies, as shown in the following graphic:

Chart N.° 1
Environmental complaints received by OEFA (2009 – 2018)



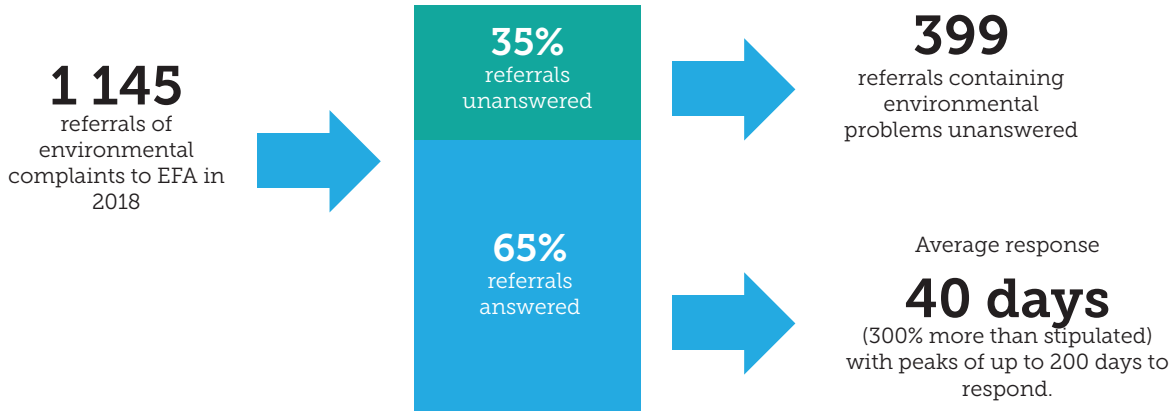
As shown, OEFA received an average of approximately 119 complaints per month in 2018 and, as noted, each of these complaints may had be referred to more than one EFA, in case they are several competent. Thus, from the 1,428 recorded complaints during 2018, 1,753 notifications were sent to the respective EFA for their attention. 608 of those referrals were transferred to OEFA competent bodies, while 1,145 were transferred to other EFA which are part of Sinefa.

With the 2018 analysis framework, the response percentage of EFA to complaint referrals made by the OEFA was 65%. This meant that more than a third of OEFA's notifications in this regard remained unanswered, wich is equivalent to 399 cases in which the citizen did not receive the expected information.

In addition, the received response average time in 2018 exceeded the 40 working days, reaching peaks of up to 200 days; a much longer time (an excess of up to 2000%) than the 10 days granted to EFA (see Diagram N.° 2). These figures also show that not only are there problems responding to notifications on environmental complaints, but that the average time to respond far exceeds given deadlines.

For the purposes of this analysis, only complaints derived to EFA other than OEFA were considered. Thus, 1,145 complaints were reported in 2018, out of which 35% (399) did not get any response.

Diagram N.° 2
Complaint referrals and response rate* in 2018



(*) All complaints that entered Sinada and have a competent EFA different from the OEFA are considered.

This behavior of EFA had two possible negative consequences:

- An environmental problem detected through a complaint goes without attention, putting at risk not only the environment status but also the people's health.
- Citizens can perceive the image of a state indifferent to their annoyances, losing confidence and credibility in the system.

1.3. Intervention recipients

At the time of the intervention, EFA other than the OEFA were a group of 1,913 public entities that can be classified into three subgroups:

- National EFA (13 national public entities)
- Regional EFA (26 regional governments)
- Local EFA (1,874 municipalities).

The intervention recipients were the national EFA, which concentrate 47% of environmental complaint referrals.

2. Recipients conduct description

As shown, the figures denote unwillingness among EFA public officials for attending to complaint notifications; w is reflected both in lack of response and in excess of days to respond.

Regarding this issue, it is appropriate to mention that Amos Tversky and Daniel Kahneman[2] demonstrated that people make decisions that are far from the rationality posed by conventional economic theory; and that that they often make judgments using general or heuristic rules, which can lead to erroneous decisions. This is how cognitive biases or prejudice arise, wich are defined as ways of processing information influenced by psychological effects that generate distortions, erroneous judgments, and inconsistent or illogical interpretations in a given context, seriously affecting social welfare.

2. Tversky, A. and Kahneman, D. (1974) revealed some biases and heuristics that influence people's decisions, which can lead to to make systematic, that is, predictable errors.

The hypothesis of this work assumes that there are factors associated with the behavior of the EFA[3] which significantly affect the relevance and opportunity to respond to requests for attention to environmental problems reported by the OEFA:

- Distraction (multitasking/distractions) – They not receive priority attention, because the format used to transfer the environmental complaint did not allow its individualization and consequent priority among the universe of documents submitted by other public entities.

- Relegation - The use of excessively legal and unclear text in the requirement format made it be perceived as a complex matter to attend to, and it may have been relegated

- Social motives and bias of status quo - There is a social norm bias involved in attending to the requirement. The responsible official considers that, although he/she has not attended to complaints before, there have been no consequences and hence he/she continues to behave in the same way.

These evidenced factors are driven by notifications from Sinada - OEFA to EFA regarding complaints.

3. Strategy

In order to intervene this problem, the strategy used was aimed at modifying the notification by which Sinada - OEFA derives complaints to national EFA so that they attend to them:

(i) Make it relevant: attracting the EFA's attention.

The design of the notification considered visual tools, which attract attention from reception stage. The changes were:

- Highlight that the notification is an **"Environmental Report".**
- The body of the document, formerly made up by paragraphs of legal content, was divided into boxes that briefly and specifically explain the derived environmental complaint and regulations.
- Process flow and explanatory texts, which were previously included on the document obverse, were moved to the reverse.

- To view the mentioned changes in the notification, both are included in Annex N.° 1.

(ii) Make it attractive: motivation with peer information and feedback

The new notification design complements information with the following:

- Feedback, so they can know their performance: including a graph showing the response percentage to all complaints in the last 12 months, accompanied by a visual element (thumbs up in case of 100% and thumb down in cases where not).

- Peer information: a comparison made by bar graphic is added to the performance of the respective EFA versus other similar EFA[4], with the intention that they match their behavior with that of their peers.

- Messages intended to keep recipients motivated: "Answering this official letter can improve the citizen's perception".

(iii) Make it easy: the quick response form

To facilitate response to Sinada - OEFA , the Information Requirements Response Form was proposed.

The design of this document responds to a logical sequence of questions and answers, which lead the official to the steps he/she must take to respond to and address the environmental complaint. Watch Annex N.º 2.

4. Experimentation

As mentioned above, the experiment was directed to the national EFA, that concentrate the highest proportion of environmental complaint referrals received by OEFA: 47% at the end of 2018.

The main research question for experimentation was the following:

3. OECD (2019), develops a series of behavioral factors that decimate the attention of individuals on a specific goal.
4. Households in San Marcos, California, USA, were provided with information about their energy consumption compared to the average consumption of other households in the area. (Thaler & Sunstein, 2008). In the experiment developed by BE OEFA, the intention was to campare an EFA with EFAs of similar characteristics, so that they could realize if their behavior towards Sinada was acceptable or not compared to that of their peers.

Will EFA improve their response rate to environmental complaints derived from the OEFA, motivated by the change in notification design, considering behavioral economics tools?.

In addition, the study measured whether there is also an effect on the average response time and on the degree of success and understanding of the quick response format designed for such purposes.

The main observed variables would be:

- «**EFA response percentage**», which is directly linked to the research question
- «**EFA average response time**», considering that there were also late responses to environmental complaints derived from the OEFA.

National EFA were randomly distributed in three groups to control the behavior of these variables:

- The first group would be sent the new complaint transfer notification (Treatment I).
- The second group would be sent the new complaint transfer notification and the response form as an attachment to that document. (Treatment II).
- And the complaints would continue to be transferred as usual to the third group (Control).

The experimentation stage lasted 7 months, starting in January 2019 and ending in July of that same year.

We use the «Differences in Differences» method, wich allows to identify the impact a treatment has had through calculation of three differences, to evaluate the results.

The first difference is calculated by comparing changes over time in the variables of interest for the group to which the treatment has been applied. The second difference is obtained from comparing changes over time in the variables of interest for the group to which the processing has not been applied (the control group). And the third difference results from the comparison between the first and the second difference[5]. The equation is simple, and is represented by the following formula:

$$DD=(T_2 - T_1) - (C_2 - C_1)$$

Where:

- **DD** is the impact of the intervention, which has been isolated from the impact of other factors that may have influenced the behavior of the observed variable.
- $\mathbf{T_2}$ is the result of measuring the variable observed in the group to which the treatment was applied, after X days since application of the treatment began.
- $\mathbf{T_1}$ is the result of measuring the variable observed in the group to which the treatment was applied, after Y days before the application of the treatment.
- $\mathbf{C_2}$ is the result of measuring the variable observed in the control group, after X days since the application of the treatment began.
- $\mathbf{C_1}$ is the result of measuring the variable observed in the control group, after Y days before the application of the treatment.

5. Results

The results obtained will be measured as compared to the first seven months of 2018[6]. In this period, 328 complaints were reported to National EFA, and a total of 145 responses were received from these entities, 44% of the total, reflecting a lower rate of attention than the total average (65%).

During this period the data were as follows:

- The EFA in the control group received responses in 52.4% of cases.
- The EFA to which Treatment I was applied received responses in 31.3% of cases.
- The EFA to which Treatment II was applied received responses in 39% of cases.

It is important to note that the chi-square test revealed that the treatment and response type variables were not independent, so it can be

5. Gertler, P. et al (2011) develop the method of differences in differences, emphasizing that it "allows to take into account any constant difference in time between treatment and control groups. Duflo, E. (2000) through the difference-in-difference methodology that assessed the effect of an unusual education program in India. Galiani, S., et al (2005) applied this method to assess the impact privatizing the drinking water provision service in Argentina.
6. It compares the first seven months of experimentation (January - July 2019) versus the similar period of 2018.

concluded that response rates for the Control, Treatment I and Treatment II groups are different[7].

Table N.° 1 organizes information on the response rates of the Control and treatment groups, for the first seven months of 2018 and Table N.° 2 shows the result of the statistical analysis performed.

Table N.º 1
Percentage of responses in 2018

	Group	Transfers	Responses	Response rate
Year 2018	Control	164	86	52.4%
	Treatment I	64	20	31.3%
	Treatment II	100	39	39.0%

Table N.º 2
Statistical tests regarding the 2018 response level

Chi-square test			
	Chi-square	DF	P-Value
Pearson	9.962	2	0.007
Likelihood ratio	10.082	2	0.006

Note: The chi-square test shows that the P-value is less than the level of significance used (α=0.05), therefore, the null hypothesis of the non- association between the variables is rejected, meaning they show that they are not independent.

Following the experimentation process, during the first seven months of 2019, 245 reports were transferred to national EFA and 186 responses were received from these entities: 76% of the total.

In this period, the results were as follows:

- The EFA in the Control group received responses in 68.5% of cases
- The EFA to which Treatment I was applied received responses in 75% of cases
- The EFAs to which Treatment II was applied received responses in 93.5% of cases

In this case the chi-square test also revealed that the treatment and response type variables were also not independent, so it can be concluded that the response rates for the Control, Treatment I and Treatment II groups are also different.

Table 3 organizes information on the response rates of the control and treatment groups for the first seven months of 2019 and Table 4 shows the result of the performed statistical analysis.

Table N.º 3
Percentage of responses in 2019

	Group	Transfers	Responses	Response rate
Year 2019	Control	143	98	68.5%
	Treatment I	40	30	75.0%
	Treatment II	62	58	93.5%

Tabla N.º 4
Statistical tests regarding the 2019 response level

Chi-square test			
	Chi-square	DF	P-Value
Pearson	16.207	2	0.000
Relación de verosimilitud	19.344	2	0.000

Note: The chi-square test shows that the P-value is less than the level of significance used (α=0.05), therefore the null hypothesis of the non association between the variables is rejected, meaning they show that they are not independent.

Using the information described in the preceding paragraphs, the Differences in Differences method was applied to determine the isolated impact of each of the treatments.

So we have that for Treatment I, the calculation was (75% - 31.3%) - (68.5% - 52.4%), which shows an isolated impact of 27.6% increase in the response percentage for this treatment.

For Treatment II the calculation was (93.5% - 39%)- (68.5% - 52.4%), obtaining an isolated impact of 38.4% increase in the response percentage.

According to this analysis, both treatments could be considered to have had a positive effect by an overall increase in the percentage of EFA responses by 34%.

On the other hand, the 2018 data are first observed before the experiment, when calculating the average response days in business days for each of the EFA groups:

7. The chi-square independence test is used to determine whether the observed value of one variable depends on the observed value of another variable. Minitab 18 Statistical Software (2020).

(i) The EFA in the Control group responded to complaints in 57.2 days on average.

(ii) The EFA in the group to which Treatment I would then be applied responded to complaint transfers in 83.2 days on average.

(iii) The EFA in the group to which Treatment II would then be applied responded in 63 days on average.

According to the Tukey test, the response time for Treatment I is longer than for Control and Treatment II groups, and the difference between the latter two is not significant[8].

Table N.° 5 organizes information on the average response time to transfers of complaints made in 2018, and Table N.° 6 and Figure N.° 1 show the result of the statistical analysis performed.

Table N.º 5
Average response time in business days
(reports recorded in 2018)

Group	Transfers	Responses	Average time	Minimum time	Maximum time
Control	304	285	57.2	1	315
Treatment I	112	108	83.2	7	274
Treatment II	176	167	63.0	4	270

8. Fors, M. (2014) notes that "The Tukey test calculates a single critical difference to make all the comparisons between the means."

Table N.º 6
Statistical tests regarding average response time
(reports recorded in 2018)

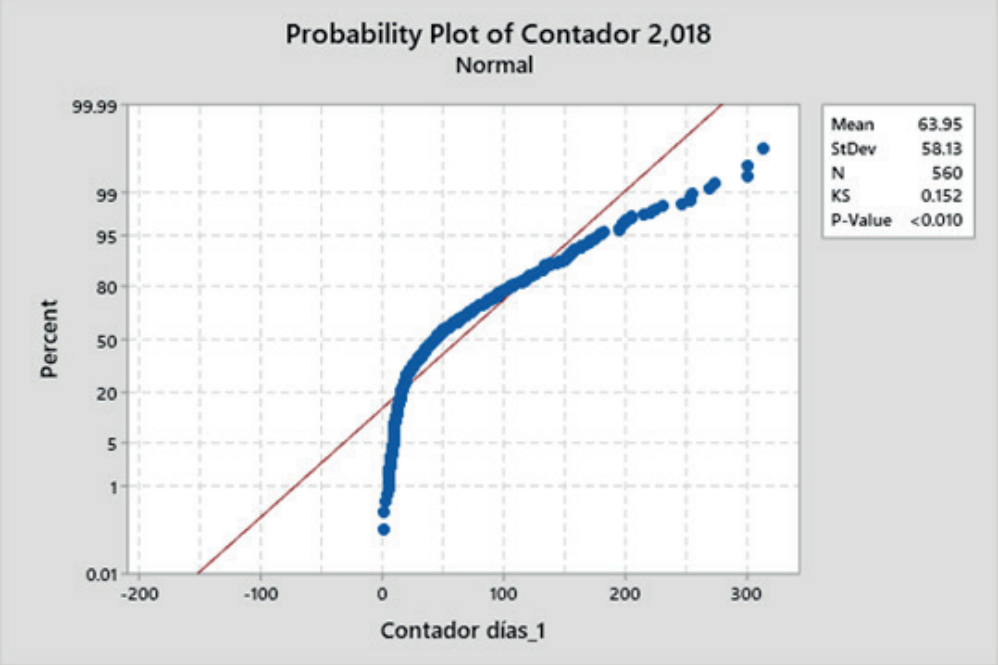
Means				
Type 1	N	Mean	StDev	95% CI
Control	285	57.18	58.48	(50.50, 63.86)
Treatment I	108	83.22	55.40	(72.37, 94.07)
Treatment II	167	63.05	56.83	(54.32, 71.77)
Pooled StDev = 57.4103				

Variance Analysis					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Tipo_1	2	53302	26651	8.09	0.000
Error	557	1835839	3296		
Total	559	1889141			

Grouping Information Using the Tukey Method and 95% Confidence			
Type 1	N	Mean	Grouping
Treatment I	108	83.22	A
Treatment II	167	63.05	B
Control	285	57.18	B

Note: When the Anova test is applied to the average response time variable, the P-value (0.000) is observed to be less than the significance level used ($\alpha = 0.05$), therefore the null hypothesis that the means are equal is rejected.
And according to the Tukey test, the average response time of Treatment I is longer than that in Control and Treatment II groups (the difference between them is not significant).

Figure N.º 1
Graphical representation of the response time variable Normal Probability Distribution
(complaints recorded in 2018)



Note: As shown in the figure, the average response time does not follow a normal distribution. Therefore, non-parametric statistics should be applied to analyze the results.

After the experiment, the results are as follows:

(i) The EFA in the control group responded to complaint notifications in 27.8 days on average.

(ii) The EFA in the group to which Treatment I was applied responded to complaint notifications in 33.2 days on average.

(iii) The EFA in the group to which Treatment II was applied responded in 16.7 days on average.

In this case, the Anova test confirmed that the average response time of Treatment II is different from that of the Control and Treatment I groups and that the difference between the latter two is not significant[9].

Table N.° 7 organizes information on the average response time to the reports made in 2019, and Table N.°8 and Figure N.°2 show the result of the statistical analysis performed.

Table N.º 7
Average response time in business days
(reports recorded in 2019)

Group	Transfers	Answers	Average time	Minimum time	Maximum time
Control	143	98	27.8	3	110
Treatment I	40	30	33.2	9	70
Treatment II	62	58	16.7	5	72

Table N.º 8
Statistical tests in average response time
(reports recorded 2019)

Means				
Type 1	N	Mean	StDev	95% CI
Control	98	27.81	17.53	(24.66, 30.95)
Treatment I	30	33.20	18.19	(27.51, 38.89)
Treatment II	58	16.66	10.42	(12.57, 20.74)
Pooled StDev = 15.7832				

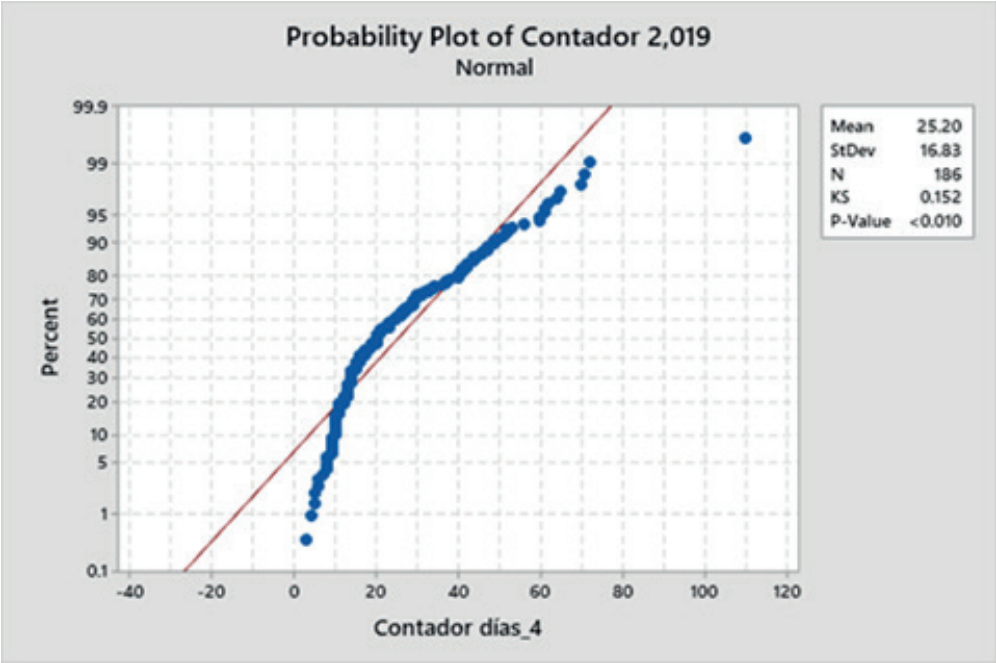
Variance Analysis					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Tipo_2	2	68.20	3410.2	13.69	0.000
Error	183	45587	249.1		
Total	185	52408			

Grouping Information Using the Tukey Method and 95% Confidence			
Type_1	N	Mean	Grouping
Treatment I	98	27.81	A
Treatment II	30	33.20	A
Control	58	16.66	

Note: When the Anova test is applied to the average response time variable, the P-value (0.000) is observed to be less than the significance level used ($\alpha = 0.05$); therefore, the null hypothesis that the means are equal is rejected. And according to the Dunnett test, there is a difference for the average time of Treatment II. The times in the Control and Treatment I groups do not appear to be different.

9. The fixed-effects ANOVA model assumes that the data come from normal populations which may differ only in their means. F. J. Weaver (1999). It is a valid option to use the ANOVA, even if the variables of interest do not follow a normal distribution, as long as the size of the samples between groups is greater than a minimum. Minitab 18 Statistical Software (2020). Socio-economic researchers who have developed evidence in favor of the application of the ANOVA test against variables that do not follow a normal distribution. Blanca, M. J., et al (2017).

Figure N.º 2
Graphical representation of the response time variable Normal Probability Distribution (complaints recorded in 2019)



Note: As shown in the figure, the average response time does not follow a normal distribution. Therefore, non-parametric statistics should be applied for analyzing the results.

Using the information described in the preceding paragraphs, the Differences in Differences method was applied to determine the isolated impact of each of the treatments.

So for Treatment I, the calculation was (83.2 - 33.2) -(57.2 - 27.8), which means that such treatment would have decreased the average response time by 20.6 calendar days. For Treatment II, the calculation was (63 - 16.7) - (57.2 - 27.8), from which it follows that such treatment would have decreased the average response time by 16.9 calendar days.

In short, a positive impact is observed with respect to the two observed variables:

- The initial response rate of 36% increased to 86% for the national EFA intervened with the experiment, achieving response rates of up to 93.5% in Treatment II, showing good performance of the new release in conjunction with the response format.
- Response time decreased considerably. Before initiating the intervention, transfers of complaints were responded within an average of 71 working days, and some responses exceeded 200 working days. After the experiment, responses were obtained within an average of 22 working days.

6. Institutionality

The positive impact obtained, both in percentage of responses and in a decrease in response times regarding transferred complaint notifications by OEFA-Sinada, has provided evidence of the good performance of the new design of the notification, improving response to environmental complaints.

Whereas the intervention was carried out only with national EFA, it is then possible to extend this practice to the total of 1,918 public entities receiving complaints through the OEFA-Sinada; however, doing so manually can create error risks or excessive time for the team no notify.

In this sense, the OEFA approved the tool to generate the new format automatically in its portfolio of technological projects, which will allow to extend the application of the described practice to the entire universe of EFA.

The progressive use of this tool – that started in the third quarter of 2020 - will provide more evidence on the widespread impact of this intervention in the future.

7. References

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8. Annexes

Annex N.º 1

Formats for transferring environmental complaints to EFA (before and after)
Previous EFA transfer format

HT: 2018-E01-094017

PERÚ | Ministerio del Ambiente | Organismo de Evaluación y Fiscalización Ambiental - OEFA | Dirección de Políticas y Estrategias en Fiscalización Ambiental

"Decenio de la Igualdad de Oportunidades para mujeres y hombres"
"Año del Diálogo y la Reconciliación Nacional"

Jesús María, 29 NOV. 2018

OFFICIAL LETTER Nº 1591-2018-OEFA/DPEF-SEFA-SINADA

Mr
General Director of Environmental Affairs
Ministry of Housing, Construction and Sanitation

Av. Paseo de la República N° 3661 – Edificio de Petroperú
San Isidro. -

Affair : Information is requested on environmental enforcement actions

Reference : Registration form for environmental complaints
Sinada Code SC-0841-2018

Of my highest consideration:

I have the pleasure of writing to you to greet you cordially and, in turn, to inform you that through the reference document the Environmental Assessment and Enforcement Agency (OEFA) became aware of the alleged environmental impact that would be generated as a result of the inadequate operation of the oxidation wells located in the village of Linderos, in the district and province of Jaén, department of Cajamarca.

On the subject, in accordance with the provisions of the Environmental Protection Regulations for projects related to the activities of Housing, Urbanism, Construction and Sanitation, approved by Supreme Decree No.015-2012-HOUSING and numerals 14 and 16 of the activities included in Annex 2 of the list of inclusion of investment projects included in the National System for Environmental Impact Assessment - SEIA, updated by Ministerial Resolution No. 157-2011 MINAM, the Directorate in charge of it is competent to supervise and supervise in matters environmental projects related to sanitation, among others.

In this sense, within the framework of the supervisory function to environmental inspection entities, conferred by Law No. 29325, Law of the National System of Environmental Assessment and Environmental Inspection, modified by Law No. 30011, I request that your office be serve to send the OEFA, within a period of ten (10) business days, information on the actions carried out or planned to be carried

Dirección de Políticas y Estrategias Ambiental - Subdirección de Seguimiento de Encargados de Fiscalización Ambiental - OEFA

Environmental Protection Regulation for projects related to the activities of Housing, Urbanism, Construction and Sanitation, approved by Supreme Decree No. 015-2012-HOUSING

"Article 5. - Sectorial activity
The competent sectoral authority in environmental matters at the national level for projects related to housing, urban planning, construction and sanitation, is the Ministry of Housing, Construction and Sanitation, being the entity in charge of ensuring compliance and application of this Regulation, in accordance with the SEIA Law and its complementary regulations".

PERÚ | Ministry of the environment | Environmental Assessment and Control Agency (OEFA) | Directorate of Policies and Strategies in Environmental Control

"Decade of Equal Opportunities for women and men"
"Year of the Fight against Corruption and Impunity"

Jesús María, 28th October, 2019

ENVIRONMENTAL COMPLAINT
Sinada Code N° SC-1275-2019

Official Letter Nº 03289-2019-OEFA/DPEF-SEFA-SINADA

Mr.
JAVIER ERNESTO HERNÁNDEZ CAMPANELLA
General Director of Environmental Affairs
Ministry of Housing, Construction and Sanitation
Av. República de Panamá N° 3660
San Isidro.-

Reported problem location		
District	Province	City
Huayllo	Aymaraes	Apurímac

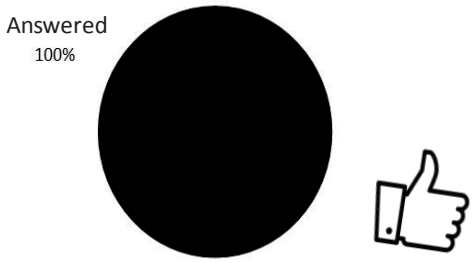
Reported fact

Presumed environmental impact that might be generated to water bodies adjacent to the Huayllo district , Aymaraes province , Apurímac city , as a consequence of inadequate sewage discharge from the integral wastewater system of the Huayllo town .

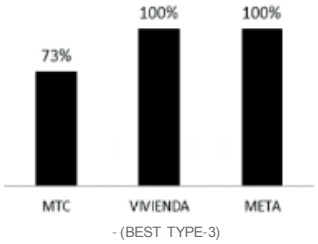
Regulations that support its competence

Article 5 of the Environmental Protection Regulation for projects linked to the activities of Housing, Urbanism, Construction and Sanitation, approved by Supreme Decree No. 015-2012-HOUSING.
Ministerial Resolution No. 157-2011-MINAM, which approves the first update of the investment project inclusion list pertaining to the National System of Environmental Impact Assessment (SEIA), considered in Annex II of the regulations of Law No. 27446, approved by Supreme Decree No. 019-2019-MINAM.

Percentage of response to OEFA in the last 12 months *



Compare your response rate to other EFA *



- (BEST TYPE-3)

Answering this letter can improve the citizen's perception .

* See reverse

Your office is requested to inform the OEFA- within a period of **ten (10) working days**- about the actions it has carried out or that it plans to carry out in order to address the environmental complaint. **You can respond to this request through the attached form**. Failure to respond to this document involves functional liability.

Sincerely,

MANUEL SANTA CRUZ SANTA CRUZ
Deputy Director of Environmental Control Entity Monitoring
Environmental Assessment and Control Agency - OEFA

Annex N.º 2

Information request response form

PERÚ | Ministry of the environment | Environmental Assessment and Control Agency (OEFA) | Directorate of Policies and Strategies in Environmental Control

"Decade of Equal Opportunities for women and men"
"Year of National Dialogue and Reconciliation"

INFORMATION REQUEST RESPONSE FORM

1. Environmental complaint data	
1.1. Sinada Code	
2. Environmental Control Entity Data	
2.1. Entity name	
2.2. Area in charge of handling the complaint	
3. Response to the request for information	

3.1. **Indicate if you have taken a supervisory action related to the events that are the subject matter of the complaint.** If you check "Yes", you must attach the minutes of the supervision carried out to this document.	Yes	
	No	
3.2. **If you have marked "Yes" in question 3.1., Indicate whether the existence of the reorted facts was attested in said diligence.** The answer to this question must be supported with the corresponding annexes (e.g. photographs, video or others).	Yes	
	No	
3.3. **If you have marked "No" in question 3.1, indicate whether in the future you will schedule a supervisory action to address the complaint.** Note that, except for reasonable reasons, inaction by the entity could lead to functional liability.	Yes	
	No	

3.4. **If you marked "Yes" in question 3.3., Please indicate the date on which the supervision has been scheduled.** The date may be indicated by referring to the period in which the supervision is scheduled…

3.5. **If you have marked "No" in question 3.3., Explain the reasons why it has been decided not to schedule a supervision to deal with the complaint.**

3.6. **Regardless of what was indicated in the previous questions, indicate what actions you have taken or will take in relation to the events reported.**

www.oefa.gob.pe
Coordination of the National Information and Environmental Complaints Service

Av. Faustino Sánchez Carrión
N° 603, 607 y 615
Jesús María - Lima, Perú
Phone : (511) 204-9900

4. Annexes

You must attach the documents you deem pertinent to support what is stated in this document. If there are documents of a confidential or reserved nature, this must be specified in the description. The information provided may be made known to the complainant, who has the right to go to your office to check the status of the actions related to his/her complaint.

N°	Description
1	
2	
3	
4	
5	

5. Data of the person in charge of the area that attends the complaint.

5.1. Names and surnames	5.5. Date
5.2. Position	**5.6. Stamp and Signature**
5.3. Phone	
5.4. Email	

Bios

Gustavo Cuellar Mendoza
An economist, he is an expert on issues related to public service regulation and information management, as well as on estimation of sanctions for violations to environmental regulations. Topics of interest: Behavioral Economics, Data Science and Public Innovation.

Andres Dimas Beisaga
A Bachelor in Systems Engineering and Computer Science from Universidad Tecnológica del Perú, he is specializing in Project Management under the PMI approach.

Dante Guerrero Barreto
A lawyer and Master in Business Management, with studies in Public Management. He is an expert in Administrative Law, Process Management and Control Systems. Topics of interest: Data analysis, programming and computer science.

Karina Montes Tapia
An economist, she is a Master in Public Management. Current Advisor to OEFA's Board of Directors Chair. She has experience in enforcement and regulatory compliance in public entities. She is a professor at Universidad Católica del Perú and Universidad del Pacífico.

Lucía Robledo Martínez
A Bachelor in Economics from the Universidad Nacional Agraria La Molina, she is responsible for control and analysis of the environmental complaints database in the Subdirectorate of Environmental Audit Institutions Monitoring.

Manuel Santa Cruz Santa Cruz
A lawyer from Universidad Nacional Mayor de San Marcos, he holds a Master's Degree in Political Science with a minor in Public Management from Universidad Antonio Ruiz de Montoya. He used to be a currently Deputy Director of Environmental Control Entity Monitoring of the OEFA.

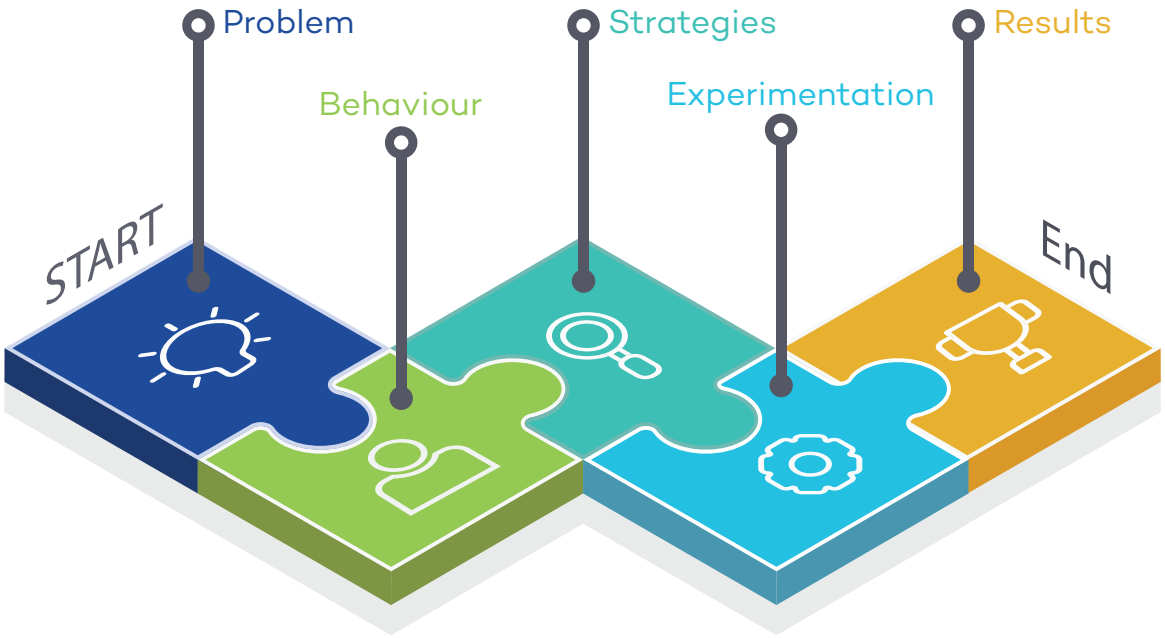
Acknowledgments:
We acknowledge Tessy Torres Sánchez, President of the Board of Directors of OEFA, and all the people who actively participate in the BE OEFA working group. We would also like to thank Gonzalo León Riofrío and David Maccari Castillo, who provided valuable contributions to the analysis of the information collected during the experiment and to the proposal automation, respectively. The experimentation phase would not have been possible without the support of Paola Castañeda Félix, Willington Ortiz Mestanza, Peter Fernández Ramos and the entire team of the National Environmental Information and Reporting Service - Sinada.

Credits

Editing:
Karina Montes Tapia

Proof-reading:
Sara Chávez Urbina ✞

From communication to action: participation in academic activities at the OEFA



Problem

Low review rate of the information detailed contained in the emails from call to the courses of the Academy of Environmental Enforcement (OEFA) **(10.6%)**.

Behaviour

The collaborators of the OEFA don´t review in detail the emails of call to courses.

Strategies

Redesign the content of mail with information that have less cognitive load.

Experimentation

Between April and September of 2019, experiments with courses of different duration and thematic were developed.

Results

The percentage of clicks within the call emails increased from **10.6%** to **34.1%**.

From communication to action: participation in academic activities at the OEFA

Óscar Carrillo Verástegui, Giovana Hurtado Magán, Luis Felipe Palacios Sánchez

August, 2020

1. Problem description and intervention recipients

1.1. General context

The Environmental Control Academy (AFA in Spanish) was founded in November 2016 with the aim of strengthening the environmental control capabilities of the OEFA employees, public entities, entities subject to government regulation and citizens.

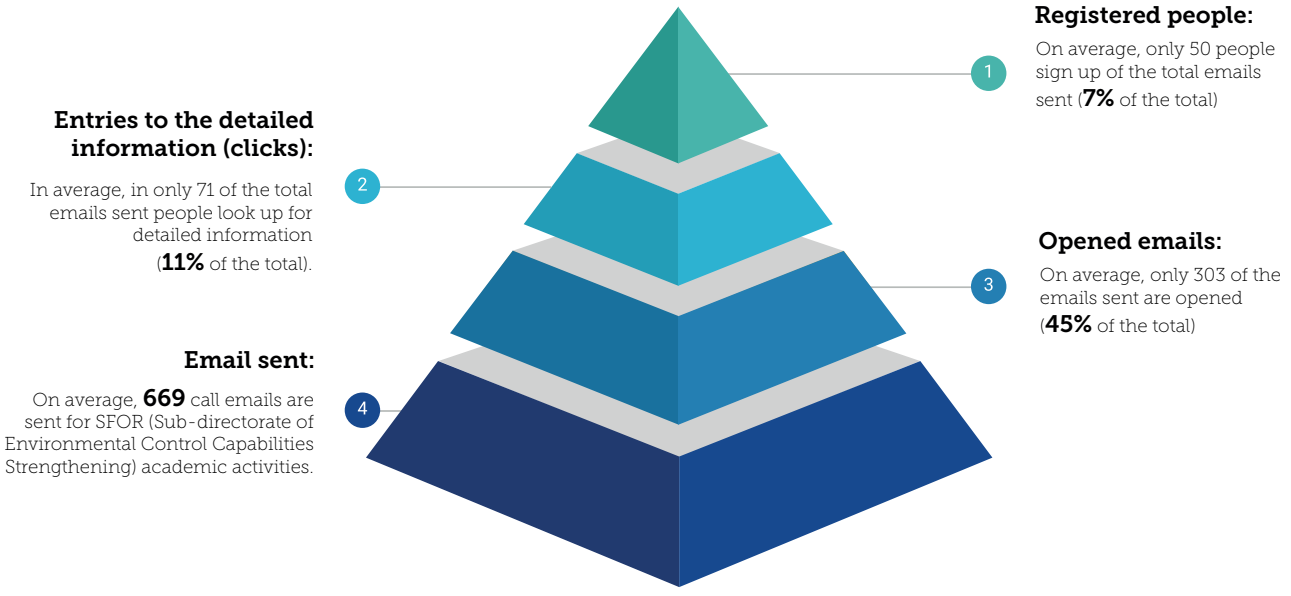
In March 2017, the AFA started its activities, and one of the most used mechanisms to promote its programs was sending automated emails as an invitation to take its courses. This tool allowed segmenting call campaigns according to the target audience; e.g.: by profession (lawyers, biologists, environmental engineers, economists, etc.), by area within the OEFA, among others, in order to obtain statistics that would allow to measure levels of email opening, opening hours, preferences, among others.

At the end of 2018, the results of the calls were measured, showing that the OEFA employees had little knowledge about the AFA educational offering because only few of them opened the call emails and did not look up their content; generating potential risks regarding the objective expected to be achieved: improve the environmental control capabilities within the OEFA.

1.2. Problem evidence

An average of 669 call emails was sent for each academic activities dissemination campaign organized by the AFA. From these emails, approximately 45% (303) were opened; however, only 11% of recipients (an average of 71 people) looked up the courses detailed information by clicking on the email links.

Figure N.º 1
Average number of sent and opened emails, clicks and people registered per academic activity



Source: AFA 2018 figures.

This situation led the AFA to send repetitive call emails (only to those who did not open the email) in order to fill the quotas for each course. In this sense, an average of four (04) mailings per call were made, achieving the registration of 7% of the recipients.

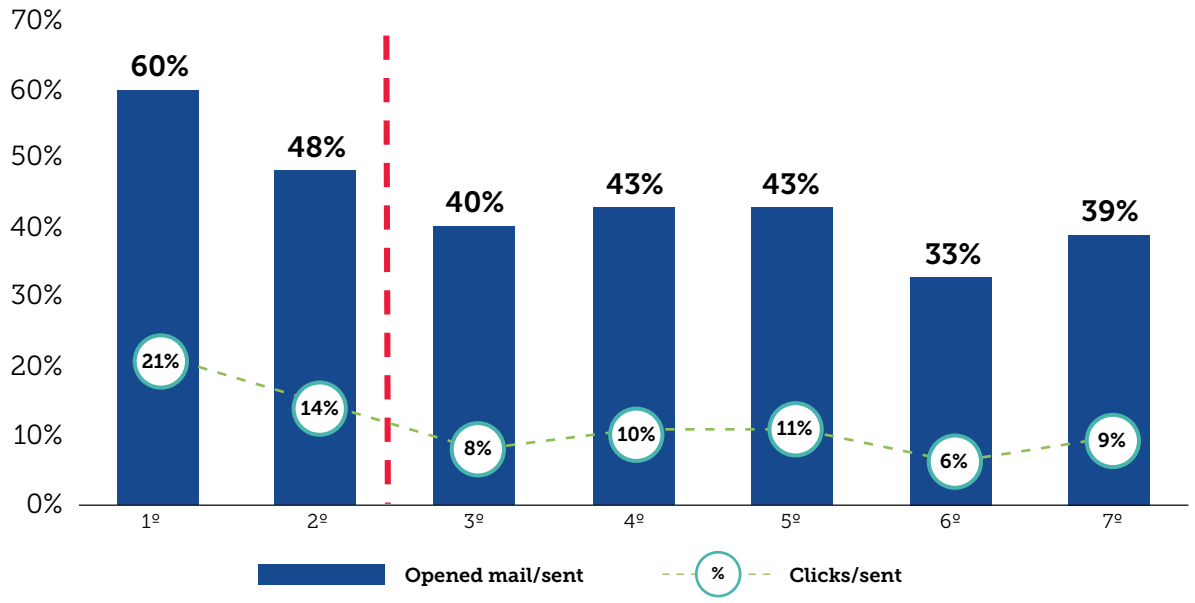
It should be noted that the scope of this problem involves an estimated universe of 1,000 OEFA different-profession employees of the Lima branch agencies, regardless of their contractual relationship with the entity.

2. Description of the recipient's behavior

As stated in the problem, a few recipients of the call campaigns opened the emails and clicked on the links to obtain more information about the courses.

The following figure shows the average opening level for each email sent. In the first email, 60% opening and 21% clicks were achieved, when forwarding that email, 48% opening and 14% clicks were achieved, and when sending the email for the third time, an average of 39% opening and 8% clicks were achieved.

Figure N.º 2
Effectiveness of the frequency of mailings regarding the review of emails and clicks



Source: AFA figures

The courses offered by the AFA represented a new product within the OEFA; therefore, it was necessary to establish a positive connection with the course recipient, taking into account the user experience, focusing on the added value, and the reason why our employees would feel motivated to strengthen their capabilities.

For that purpose, it was necessary to make a diagnosis of the OEFA employees' behavior, in order to visualize the gap between the employees' intention to sign up for a course and the specific action to do so.

To that effect, the path a person follows in order to decide to sign up for a course was traced and the goal was that their experiences during the decision-making process facilitate their AFA service selection. To address this matter, the lack of interest of the employees when it comes to look up about the courses was identified as a potential cause, due to a status quo bias. Also, the email design could be limiting the review of the message due to cognitive overload. On this basis, the following aspects were taken into account:

a. Email subject.
b. The email visual appearance and what draws the attention at a first glance.
c. Content that is going to be address at the training.

d. How the AFA's educational offering could help them to improve their environmental control skills.

3. Strategy

To identify the barriers or elements that influenced the OEFA employees behavior and to know which factors affected their decision, the behavior design Create model from the "Instituto Mexicano de Economía del Comportamiento (2016)" (Mexican Institute of Behavioral Economics) adapted for Latin America was taken as a basis.

According to this model, there are five (05) fundamental elements that are decisive for a change in behavior to occur:

1. The signal: external stimulation that triggers a reaction.
2. The reaction: automatic response that simplifies decision making.
3. The assessment: analyzing and assessing the costs and benefits of carrying out the action.
4. The skill: knowledge and resources offered to carry out the action.
5. The urgency: for the subject not to put off the decision of executing the action.

Having a clear overview of the behavioral requirements of the collaborators, after analyzing the route that a person takes to decide to sign up in a course and evaluating the factors that influence this decision, a specific intervention strategy was developed and cost-effective, which consisted of redesigning the email content of the campaigns to call the courses. For this, it was decided to consider the following elements of the Create model:

3.1 In the signal

A more polished calls' design was carried out, highlighting the aspects that facilitate the element linked to the skills.

3.2 In the reaction

The mechanisms and the targeting criteria in each academic activity organized by the AFA were improved, in order to personalize each call according to the employee profile. By doing so, we seek to generate in the employee the idea of being a recipient who has been taken into consideration in accordance to their performance and track record through the fact that each course is being offered pursuant to the employee profile and the importance of their contribution to the OEFA.

3.3 In the skill

More information was provided in the calls regarding: (i) the description of the activity; (ii) the link between the learning objectives and their utility in improving the employee's daily work according to the knowledge path; (iii) and the description of the instructor's profile.

To that effect, a visual strategy was used in order to facilitate the review of different aspects that will contribute to the decision-making of the OEFA employees, through a new design of a course-call banner, which contained more information displayed in a more friendly format[1].

In addition to that, the mailings were targeted according to the professional profile and the type of courses. This involved an improvement in the systematization and organization of the OEFA employees database, considering different factors.

3.4 Courses in which the experiment was applied

To select the courses in which the experiment would be applied, the following features were considered:

- The courses should have a duration of 08 to 24 chronological hours.
- The period of execution of the course should not exceed the period of 6 weeks.
- The maximum number of sessions of the course should be 8.
- The recipients of the courses have to be professionals from different specialties or careers.

In that sense, the experimentation period took place between the months of April and September 2019 and was applied to the following courses:

1. According to some studies, one of the most relevant factors to increase the review (or response) to an email (or survey) turns out to be its length and content, and how much effort and time it takes to review and/or fill in the information. See the studies made by Allen, D. (2016) and Trespalacios, J., Perkins, R. (2016).

1. Workshop on Waterproofing and Closure Systems using Geosynthetics.

- Carried out during May 2019 with a total of 8 hours.
- Treatment group: 129
- Control group: 131
- Number of mailings: 01

2. Course on Public Management and Environmental Policies.

- Carried out during May and June 2019 with a total of 15 hours.
- Treatment group: 435
- Control Group: 462
- Number of mailings: 01

3. Course on Wastewater and Effluent Treatment Systems.

- Carried out during June 2019 with a total of 21 hours.
- Treatment group: 188
- Control group: 207
- Number of mailings: 01

4. Online Course on Occupational Health and Safety. Survival in the Field.

- Carried out during August and September 2019 with a total of 20 hours.
- Treatment group: 57
- Control group: 68
- Number of mailings: 02

5. Course on Comprehensive Management of Solid Waste.

- Carried out during April and May 2019 with a total of 24 hours each.
- Treatment group: 67
- Control group: 44
- Number of mailings: 02

6. Course on Strategic Regulation Design.

- Carried out during July and August 2019 with a total of 24 hours.
- Treatment group: 104
- Control group: 100
- Number of mailings: 03

The designs made for each of the calls are attached as part of the Annexes.

4. Experimentation

The intervention was aimed to increase the level of clicks within the opened emails, which would show a greater knowledge of the AFA educational offering.

In that sense, the research question presented was: How to increase the level of clicks within opened emails?

The hypothesis was: In order to ensure that the largest number of recipients find out about the AFA educational offering, is necessary to increase the level of clicks within opened emails.

The indicator to be measured was: percentage of clicks made to opened emails[2]

To evaluate its effect on the target audience, the scientific method was used. Through an experimental design, the variables "click on the email" (dependent variable) and "type of design" (independent variable) were analyzed

To analyze and compare the effect on the "type of design" stimulation, the experimental design had a post-test and a control group[3].

First, a control group and a treatment group were randomly conformed, ensuring that both groups had similar features[4]. The control group was always sent the call banners with the old design, and the treatment group those with the new design.

The only difference between the treatment and control groups was the presence-absence of the independent variable, since the date and time in which the distinct emails were sent were the same for both groups.

In order to measure clicks within opened emails in both groups, compare the impact and assess whether this difference was significant, statistics were used through Stata software, with which a variable test was employed along with the "closest neighbor" technique.

2. Unique clicks are considered, the number of times a person clicked on the same email is not counted.
3. This design includes two groups: one receives the experimental treatment and the other (not a control group). That is, the manipulation of the independent variable reaches only two levels: presence and absence. Subjects are randomly assigned to groups. When the manipulation concludes, both are given a measurement on the dependent variable under study (Hernández-Sampieri and Mendoza, 2018).
4. To ensure randomness and isolate the groups from occasions where groups share information with each other, the Propensity Score Matching methodology was applied in parallel and the results showed that the groups maintained the randomization quality.

5. Results

The results of the experiment show that the percentage of clicks made on opened emails has increased, as set out in the following table:

Chart N.º 1
Results of the experiment

Group	Before the intervention	After the intervention	Differences
Treatmen	10.6%	34.15%	23.55%
Control	10.6%	24.44%	13.84%
Differences	0	9.7%	9.7%

In both groups, clicks within opened emails have increased. In the treatment group, there is an increase by 24% of clicks and in the control group, only 14%, whereby the difference between both of them is 9.7%.

To assess the reliability of the results, a parametric statistical test was applied, and the impact was measured, obtaining similar statistical results[5].

Additionally, a reduction in the frequency of mailings was obtained by more than 50%.

6. References

Allen, D. (2016). *The Impact of Shortening a Long Survey on Response Rate and Response Quality*. Scholar Archive, Brigham Young University: https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=6967&context=etd

Hernández- Sampieri, R. y Mendoza, C. (2018). *Metodología de la Investigación: las rutas cuantitativa, cualitativa y mixta*. Mac Graw Hill. México.

Instituto Mexicano de Economía del Comportamiento. (2016). *Guía de Economía del comportamiento*. Volumen 1 Políticas Públicas. México.

Trespalacios, J., Perkins, R. (2016). *Effects of Personalization and Invitation Email Length on Web-Based Survey Response Rates*. Scholar Works, Departament of Educational Technology, Boise State University: https://core.ac.uk/download/pdf/61754723.pdf

5. Variable test:

Impact calculation methodology	Impact value	t student* or p-value
"Closest neighbor", considering the whole sample	9,7%	t=3.159

7. Annexes

Annex N.º 1

Workshop on Waterproofing and Closure Systems using Geosynthetics (8 hours)

Old design: control group	New design: treatment group

Old design: control group

afa Academia de Fiscalización Ambiental

Waterproofing and closure systems using Geosynthetics

Dear collaborators,

We invite you to participate in this academic activity.

This workshop is aimed at updating the knowledge on the diversity of geosynthetics used in mine closure and industrial waterproofing. Also, understanding the types of waterproofing and durability that can be expected when using geosynthetics. Updating the installation and quality control processes in its execution. Understanding the methodologies that support the use of geosynthetics in mine closures and landfill sites.

SCHEDULE

Date	Place AFA	Time
May 14 and 15, 2019.	AFA Classroom, OEFA 1st Floor (Av. Faustino Sánchez Carrión No. 615 – Jesús María)	From 8:45 to 13:00 hrs.

SIGN UP HERE

Please confirm your registration up until May 10 at 12:00 hrs.

Please access the following registration form, fill up your information and accept the enrollment commitment

- *The following speakers will be in charge of the workshop:*
  Gustavo Fierro
  Augusto Alza
  Roberto Díaz
  Julio Guerra
- *Duration: 8 teaching hours*
- *Limited capacity*

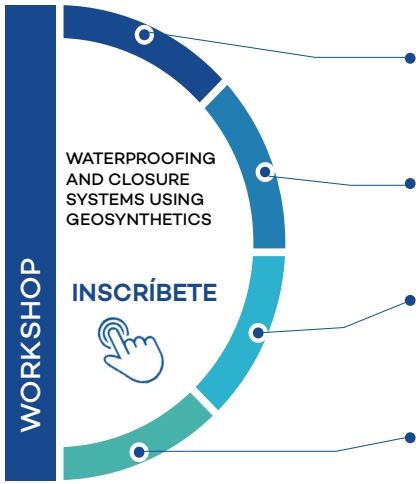
Oefa Organismo de Evaluación y Fiscalización Ambiental

Av. Faustino Sánchez Carrión Nº 615 - Jesús María
Central 204-9900
www.oefa.gob.pe

New design: treatment group

Oefa Organismo de Evaluación y Fiscalización Ambiental

afa Academia de Fiscalización Ambiental



KNOWLEDGE PATH:

OBJECTIVE:

This workshop is aimed at updating the knowledge on the diversity of geosynthetics used in mine closure and industrial waterproofing. Also, understanding the types of waterproofing and durability that can be expected when using geosynthetics. Updating the installation and quality control processes in its execution. Understanding the methodologies that support the use of geosynthetics in mine closures and landfill sites.

SPEAKERS:

Gustavo Fierro
Augusto Alza
Roberto Díaz
Julio Guerra

PLACE AND DATES:

May 14 and 15, 2019.
From 8:45 to 13:00.
AFA Classroom (1st Floor).

ADDITIONAL INFORMATION:

Schedule

AFA guidelines

Annex N.º 2

Course on Public Management and Environmental Policies (15 hours)

Old design: control group

afa Academia de Fiscalización Ambiental

Public Management and Environmental Policies

Hello,

We invite you to participate in this academic activity.

This workshop-course is aimed at providing OEFA and Environmental sector professionals with a panoramic view of the State role in managing social and economic reformations through public environmental policies.

SCHEDULE

Date	Place AFA	Time
Fridays, May 10, 17, 24, 31 and June 7, 2019	AFA Classroom, OEFA 1st Floor (Av. Faustino Sánchez Carrión No. 615 – Jesús María)	From 9:00 to 12:00 hrs.

SIGN UP HERE

Please confirm your registration until May 10 at 12:00 hrs.

Please access the following registration form, fill up your information and accept the enrollment commitment

- *The following speakers will be in charge of the workshop: Dr. Hebert Tassano Velaochaga, Dra. Eliana Ames Vega*
- *A Certificate of completion will be granted*
- *Duration: 15 teaching hours*

New design: treatment group

Oefa Organismo de Evaluación y Fiscalización Ambiental

afa Academia de Fiscalización Ambiental

KNOWLEDGE PATH:

OBJECTIVE:

Provide OEFA and Environmental sector professionals with a panoramic view of the State role in managing social and economic reformations through public environmental policies.

SPEAKERS:

Dr. Hebert Tassano Velaochaga
Dr. Eliana Ames Vega

PLACE AND DATES:

Fridays, May 10, 17, 24, 31 and June 7, 2019.
From 9.00 to 12:00 (See the syllabus)
AFA Classroom (1st Floor).

ADDITIONAL INFORMATION:

Schedule

AFA guidelines

Annex N.º 3

Course on Wastewater and Effluent Treatment Systems (21 hours)

Old design: control group

afa Academia de Fiscalización Ambiental

Course

Wastewater and Effluent Treatment Systems

Hello,

We invite you to participate in this academic activity.

This course is aimed at strengthening the officers capabilities on issues related to the comprehensive management and handling of the treatment system domestic wastewater and liquid mining effluents, taking into account technical - legal aspects such as national environmental quality standards for water that must be taken into consideration for proper management.

SCHEDULE

Date	Place AFA	Time
Tuesdays and Thursdays June 4,6,11,13,18,20 and 25, 2019	AFA Classroom, OEFA 1st Floor (Av. Faustino Sánchez Carrión No. 615 – Jesús María)	From 18:00 to 21:00 hrs.

SIGN UP HERE

Please confirm your registration until May 28 at 12:00 hrs.

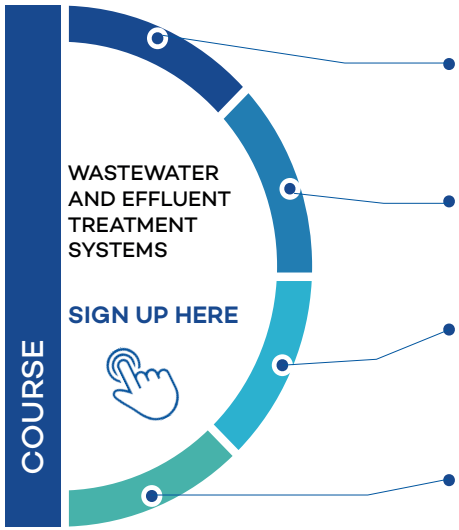
Please access the following registration form, fill up your information and accept the enrollment commitment.

- *The following speakers will be in charge of the course:*
  Eng. Leonor Carmen Méndez Quincho
  Eng. Rubén Román Quispetupa
- *Duration: 21 teaching hours*
- *Duration: 21 teaching hours*

New design: treatment group

Oefa Organismo de Evaluación y Fiscalización Ambiental

afa Academia de Fiscalización Ambiental



OBJECTIVE:

to strengthen the officers capabilities on issues related to the comprehensive management and handling of the treatment system domestic wastewater and liquid mining effluents, taking into account technical - legal aspects such as national environmental quality standards for water that must be taken into consideration for proper management.

SPEAKERS:

Eng. Leonor Carmen Méndez Quincho
Eng. Ruben Roman Quispetupa

PLACE AND DATES:

Tuesday sand Thursdays
June 4,6,11,13,18,20 and 25, 2019
18:00. to 21:00 hrs. (See syllabus)
AFA Classroom (1st Floor)

ADDITIONAL INFORMATION:

Schedule

KNOWLEDGE PATH:

AFA guidelines

Annex N.º 4

Online Course on Occupational Health and Safety. Survival in the Field (20 hours)

Old design: control group

Course on Occupational Health and Safety. Survival in the Field

This course will allow you to apply the technical and legal framework that regulates security and occupational health in critical case analysis. Analyze the processes of audit and evaluate its development and results, identifying the factors of risk and possible damage from an occupational health and safety perspective. Raise opportunities for improvement to achieve effective and efficient management. Know the basic aspects of acting in an emergency during an inspection activity.

SCHEDULE

Date	Place AFA	Time
From August 15 to September 15, 2019	AFA Virtual Platform	20

SIGN UP HERE

Av. Faustino Sánchez Carrión Nº 615 - Jesús María Central 204-9900 www.oefa.gob.pe

New design: treatment group

OBJECTIVE:
This course will allow them to apply the technical and legal framework that regulates security and occupational health in critical case analysis. Analyze the processes of audit and evaluate its development and results, identifying the factors of risk and possible damage from an occupational health and safety perspective. Raise opportunities for improvement to achieve effective and efficient management. Know the basic aspects of acting in an emergency during an inspection activity.

INSTRUCTOR:
Luis Alex Orrego Ferreyros

PLACE AND DATES:
AFA Virtual Platform.
From August 15 to September 15, 2019

ADDITIONAL INFORMATION:
Schedule

KNOWLEDGE PATH:

AFA guidelines

Annex N.º 5

Course on Comprehensive Solid Waste Management (24 hours)

Old design: control group

afa Academia de Fiscalización Ambiental

Course

Course on Comprehensive Management of Solid Waste

Dear collaborators,

We invite you to participate in this academic activity. The purpose of this course is to strengthen the capabilities of officers in matters related to the management and comprehensive management of hazardous, municipal solid waste and waste management activities construction, taking into account the technical - legal aspects that must be taken into consideration for its adequate management that must be taken into consideration for its adequate comprehensive management.

SCHEDULE

Date	Place AFA	Time
April 15, 22, 25, 29, 02, 06, 09 and May 13, 2019	AFA Classroom, OEFA 1st Floor (Av. Faustino Sánchez Carrión No. 615 – Jesús María)	From 18:00 to 21:00 hrs.

SIGN UP HERE

Please confirm your registration until April 4.

Please access the following registration form, fill up your information and accept the enrollment commitment.

- *The following speaker will be in charge of the course: Eng. Leandro Sandoval Alvarado*
- *A Certificate of attendance will be granted*
- *Duration: 28 teaching hours*

Oefa Organismo de Evaluación y Fiscalización Ambiental

Av. Faustino Sánchez Carrión N° 615 - Jesús María Central 204-9900 www.oefa.gob.pe

New design: treatment group

Oefa Organismo de Evaluación y Fiscalización Ambiental

afa Academia de Fiscalización Ambiental

KNOWLEDGE PATH:

OBJECTIVE:

Strenghten the capabilities of officers in matters related to the management and comprehensive management of hazardous, municipal solid waste and waste management activities.

construction, taking into account the technical - legal aspects that must be taken into consideration for its adequate management that must be taken into consideration for its adequate comprehensive management.

SPEAKERS:

Eng. Leandro Sandoval Alvarado

PLACE AND DATES:

April 15, 22, 25, 29, 02, 06, 09 and May 13, 2019
18:00 to 21:00 hrs. (See syllabus)
AFA Classroom (1st Floor)

ADDITIONAL INFORMATION:

Schedule

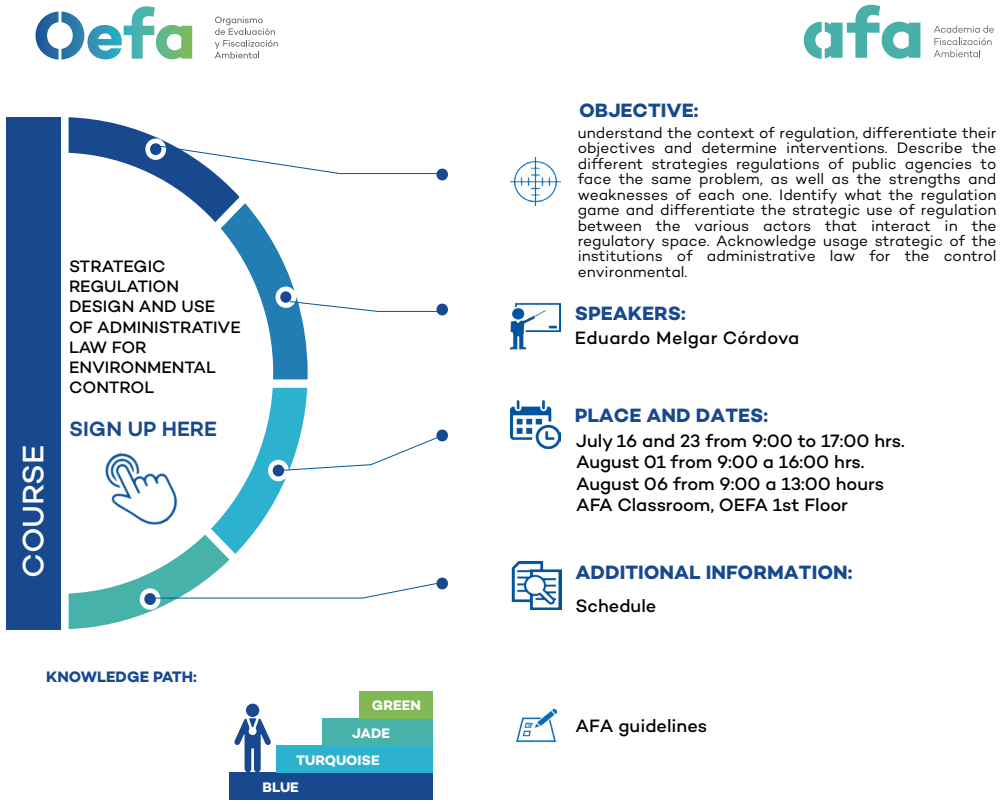
AFA guidelines

Annex N.º 6

Course on Strategic Regulation Design (24 hours)

Old design: control group

New design: treatment group



Bios

Óscar Carrillo Verástegui
Economist. Expert in issues related to the estimation of sanctions and assessment of environmental impact, as well as in the evaluation of public policies applied to the environmental sector. Topics of interest: Applied Microeconomics, Environmental Economy and Public Policy Assessment.

Giovana Hurtado Magán
Lawyer and Master in Administration. With completed studies in education and master's degree in Public Management. Expert in continuous adult training. Topics of interest Labor and Administrative Law, university teaching in these areas.

Luis Felipe Palacios Sánchez
Economist Engineer, graduated from the National University of Engineering. With specialization studies in Applied Econometrics, Microeconomics, Macroeconomics and Statistics. Participant in the XIII CEU of Osinergmin and in the IDB-PERU Chair. With experience in regulatory bodies, banking and consulting.

Acknowledgment:
To Gisela Lizbeth Jiménez Bustamante because she elaborated the new calls designs and was in charge of the mailings and to Alvaro Santiago Tassano Ramos, because he helped establishing the baseline and made the measurements that served as the basis of analysis.

Credits

Editing:
Karina Montes Tapia

Proof-reading:
Sara Chávez Urbina ✞

Promoting better decisions: the infringements rectification case in the mining sector

2018

The administered did not correct because they considered that nobody does it; and they don´t identify their benefits.

91%
defaults NOT remedied

619*
Breaches detected

Increase access and understanding of the benefits of remedying non-compliance of the environmental obligations at different levels of the decision chain.

During the supervision
The responsible or heads of the mining project were informed verbally of the benefits of remediation.

2
activities of intervention

During the supervision process
Letters addressed to the policyholders of the mining company decisions on the economic and legal benefits of remediation.

*OEFA en cifras. IV trimestre del 2018
www.oefa.gob.pe/?wpfb_dl=34061

PROBLEM
Low rate of voluntary remedy defaults for the administrators of the large and medium mining.
(8.3%)

BEHAVIOUR · STRATEGIES · EXPERIMENTATION · RESULTS

2019

The manager takes into account the information in a better way when it is transmitted verbally and in writing.

From 8.3 % to

40.6 %
defaults remedied

Dissemination of visual material (triptych) to those administered in supervisory actions on field.

Submission of letters directed to the takers of decisions

3
treatments applied

Dialogues about the benefits derived from correction of breaches during field supervision actions.

The percentage of correction of non-compliances rose from 8.3% in 2018 to 40.6% in 2019, which is attributable to the application of the experiment.

Key strategies:

Training for supervision teams of the OEFA

New ways of presenting the benefits of correction: concise, accurate and friendly

Benefits of remediation for the managed

Beginning of Administrative Penalty Process

Before

After

File of proceedings	40% off discount	20% off discount
By rectifying or correcting a slight non-compliance	In the sanction, by correcting a transcendent breach	In the sanction, by correcting a slight or transcendent non-compliance

Promoting better decisions: the infringements rectification case in the mining sector

Franklin Aguilar Salvador, Jericó Fiestas Flores, Juan Carlos Neira Campos,
Claudia Oscco Gaspar, Tessy Torres Sánchez.

August, 2020

1. Problem description

1.1. Current situation

The Environmental Assessment and Control Agency (OEFA by its acronym in Spanish), through its Energy and Mine Supervision Directorate (DSEM by its acronym in Spanish), carries out oversight actions with the purpose of verifying the compliance with auditable obligations that are competence of the institution. These actions used to be performed done under an oversight procedure which, upon detection of infringements, concluded with a report recommending the start of an Administrative Sanctioning Procedure.

Under this framework, the supervision function was not sufficient for achieveming OEFA's mission, since the mere fact of verifying the infringements does not lead to an effective protection of the environment and preservation of health to the benefit of the population, but becomes a sanctioning procedure that by its own dynamics may conclude several years after the non-compliance has been detected, with which the correction of the offending conduct -that is, the elimination of the risk or environmental damage- is delayed in time.

Since 2017, the DSEM began to act through its supervisors promoting compliance and significantly exercising the legal authority that allows it to impose so-called "preventive" administrative measures, which are intended - in the face of a significant risk or damage arising from infringements - to correct the offending conduct as soon as possible.

Likewise, with the Supervision[1] Regulations an environmental risk analysis methodology was introduced. According toit, in case the offending behavior is corrected, it is considered whether it is appropriate to qualify the infraction as serious or minor. If the latter is the case, the supervision result is dismissed.

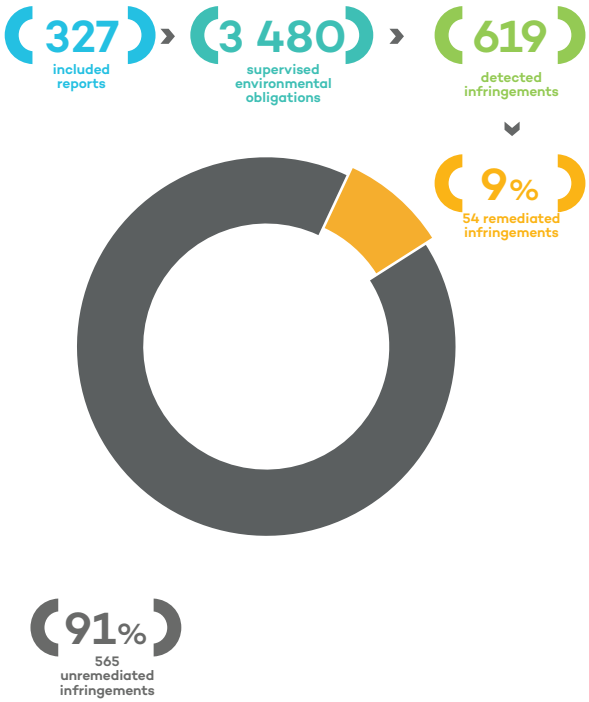
In addition, the fine is indirectly reduced when the calculation methodology is applied following a correction of the conduct if a penalty is imposed, in the framework of the Administrative Sanctioning Procedure (2)[2].

1.2. Empirical Evidence

One year after its implementation, there are key sectors with low rates of remediated infringements, as is the case of the mining sector.

According to "OEFA en Cifras al IV trimestre – 2018"[3], the remediation percentage of detected

Figure N.º 1
Summary of supervision actions in mining



1. Resolution 006-2019-OEFA/CD.
2. Taking into account that damage is a factor to be considered to determine the fine, correction of the conduct in the shortest time possible, may result in damage reduction.
3. http://www.oefa.gob.pe/?wpfb_dl=34061

infringements was only 9%. Based upon this, one can observethat, despite the existence of tangible benefits for supervised parties stemming from remediatingh infringements, the rate is still quite low (9%), which has a direct impact on the fact that behaviors are not corrected in a timely manner, putting environmental quality and, consequently, the well-being of the population, at greater risk.

2. Of the Recipient's behavior description

Companies supervised by OEFA in the mining sector are large and medium sized mining companies, meaning that decisions are made at different levels and depending on the complexity of each case. However, it is likely that workers, depending on their position or role, do not have the same information and are influenced by different biases.

One of them is the perception that they do not identify that correcting infringements is a common behavior of the other actors in the industry (bandwagon bias), so they should not do it either. Likewise, it is likely that workers in the plant will decide not to prevent some types of infringements because they are optimistic and think that the inspector will not impose a sanction to them in the short or medium term (OECD, 2017).

On the other hand, it may be the case that the information available on the requirements to correct an infringement generates a cognitive overload in the staff because there is no clear or easily accessible information, discouraging this type of action (OECD, 2017).

Wright et al (2017) discussed how information on ecosystem services is presented in decision makers influences them. Their results show that this information is critical for them, but that much of the information on the subject comes from the academia, so it is not completely internalized by managers. For this reason, it is necessary to show the information in a more accessible format that demonstrates credibility and legitimacy.

Another important factor to consider is the sunk cost bias, by which the company does not identify the benefit of performing the remedial actions. In this regard, it is necessary to present the advantages and benefits of correcting the offending behaviors to all actors in the decision-making chain. Madein and Sholihin (2015) show that in the case of Indonesia, authorities at management level take into account available social and environmental information when evaluating a decision, so presenting the benefits to the environment and to the company itself could influence the decision to be taken according to administrative authority expectations. Even if the general manager is not very knowledgeable on the subject and is in a context of uncertainty, having new information for this type of agent often results in better decision making (Wu and Seidmann, 2018).

On the other hand, remediating and/or rectifying the infraction has an impact on the company's reputation by reducing the number of environmental violations that could be reported in public access information requests. The U.S. Environmental Protection Agency (EPA) implemented a program based on public recognition incentives for companies that voluntarily reduce their pollutants, called the 33/50 program (EPA, 1998). This program provides evidence of how public recognition can influence company decision-making.

In short, assertive information dissemination influences company management decisions, and typically yields greater economic, social and environmental benefits.

3. Strategy

In order to reduce cognitive overload and sunk cost biases, the project sought to increase access to and understanding of information on remediation benefits at different levels of the decision chain. To this end, two types of activities were designed:

- An activity during the supervision action, aimed at the people responsible for or in charge of the mining project, and,
- An activity during the supervision procedure, which was aimed at company decision makers.

The first activity was carried out during on-site supervision, at which time supervisors informed plant managers orally about remediation benefits from an economic and legal perspective and, at the same time, handed out leaflets with a summary of information about said benefits. This was designed to reduce cognitive overload bias, providing clear and understandable information for an audience unfamiliar with legal or economic terms. It was also hoped that this would help field workers understand the benefits of remediating infringements quickly and avoiding administrative procedures that could result in fines.

However, since not all decisions depend on field staff, considering that in some cases high investment amounts are required to remediate the offending behavior, a second activity was carried out, which consisted in sending letters with information regarding the remediation economic

and legal benefits , addressed to decision makers to reduce the sunk cost bias, encouraging them to make the necessary investment to remediate detected infringements. By doing this we tried to attack the main biases identified in the decision-making chain, through the following objectives:

General Objective
To increase the remediation rate of infringements detected in the supervision by the managers of the mining sub-sector.

Specific Objective
To carry out actions that improve OEFA's intervention strategy in order to encourage remediation of infringements in offending behaviors, transmitting to information to supervised parties about remediation benefits.

4. Experimentation

For this stage, the Mining Environmental Supervision Coordination teams were selected as an experimental group to supervise mining units in the Development stage, since this team is the most interrelated with supervised parties.

The intervention consisted in transmitting information to supervised parties about remediation legal and economic benefits . These include dismissing the supervision finding and decreasing the sanction amount , if applicable. To this end, supervisors were trained in the correct way to apply these instruments and the material to be used (letters and brochures) was designed.

Three treatments were designed to verify the objective set:

- (DI) dialogues held during field supervision actions.
- (TR) dissemination of visual material (tri-folds) to supervised parties during supervision actions, and.
- (CA) letters addressed to supervised parties' decision makers.

The supervised parties overseen in 2018 and 2019 will be taken into account to measure the results.

It should be noted that the universe of mining units in the development stage included 117 auditable units. However, this number was curtailed because the supervised units should meet the following characteristics:

- The units had to be monitored in both 2018 and 2019, in order to make the measurement before and after the intervention.
- The supervisions had to be regular and in person. Considering that there may be other types of supervision - such as emergency ones - where development and treatment are different.
- The activities should be development activities.
- The supervisions must be concluded; that is, they must have the conclusion report.
- Curable infringements should have been detected in performed supervisions.

In order to measure the aggregate impact of treatment, the following groups are considered:

Chart N.º 1
Treatment groups

Outcomesl	Description	Received Intervention	Effectively Considered
Control (2018)	Supervised parties overseen in 2018 and also in 2019	25	19

Control group	Description	Received Intervention	Effectively Considered
Control (2018)	Managed supervised in 2018 who were also supervised in 2019	25	19
Group 2 (2019)	Informative dialogue with the manager and delivery of the tri-fold with relevant information for the correction to managers during the supervision 2019	12	8
Group 3 (2019)	Dialogue with the supervised party, tri-fold delivery and sending of information letter on the remediation to supervised parties after the 2019 supervision.	3	3
Group 4 (2019)	Dialogue with the supervised party and sending of information letter on remediation to supervised parties after the 2019 supervision.	2	2
	Total	25	19

As the group assignment tables show, although 25 received intervention, only 19 were actually considered for the measurement stage, due to the fact that there were unresolvable non-compliance cases , which prevented supervised parties from carrying out activities to correct the aforementioned non-compliance and hampered comparison between the 2018 and 2019 supervisions.

5. Outcomes

Improvement of the supervision strategy was prioritized, changing the supervision focus from verifying obligations and, when appropriate, identifying infringements, to carrying out actions to promote compliance with environmental obligations, providing information on their benefits.

Previous measures taken were the training of supervision teams and the preparation of attractive and friendly informative material aiming at attracting supervised parties' interest, which has been implemented from March 2019 to date.

The dialogues and informative material focused on transmitting the remediation legal and economic benefits of , considering the current legal framework, to those in charge of the auditable units and to company managers.

To verify that the information was provided during the supervisory action, supervised parties had to witness to that fact in the supervisory action's closing minutes. The same method was used to verify the tri-folds were delivered. In the case of the letters, delivery slips were used as a means of verification. All these means of verification were also to be found in OEFA's Applied Information for Control System (INAF System by its acronym in Spanish).

6. Limitations

Although the isolated effect generated by the information provided can be identified, the effects derived from the information transmitted through leaflets and letters are analyzed as aggregate effects. The experiment was designed in this way due to the reduced number of auditable units available to implement each treatment separately. Besides, it is unlikely that there was no dialogue on the subject between the supervisor and the manager during the delivery of the tri-fold during supervision. It must be considered that auditable units and non- compliance are not totally homogeneous between themselves, so that the effects of each treatment may have a high variability.

On the other hand, we should mention the significant reduction of auditable units first programmed in the experiment. Initially, 117 auditable units from a random group had been considered among supervised parties in 2018 and 2019; however, not all the planned supervisions were carried out under the conditions required by the experiment (regular supervisions, on-site supervisions, etc.), and they were not carried out for logistical reasons either. Once the 2019 supervisions were completed, the number of auditable units which had some type of documentation that evidenced dialogue completion , or brochure or letter delivery was 25. Finally, only 19 could be used, since the others had incurred in irremediable infringements , which prevented supervised parties from carrying out the activities aimed at correcting the situation and barred comparison between the 2018 and 2019 supervisions.

7. Results

Group	2018				2019				
	Remediated PI	PI Remediated in the field	Remediated PI to Date	% of Remediation	Remediated PI	PI Remediated in the field	PI Remediated in the date	PI Remediated in the date	2018 – 2019 Percentage Point Difference
Group 1 DI	19	0	4	21.1%	29	10	13	44.8%	23.8
Group 2 DI+TR	19	0	0	0.0%	34	4	13	38.2%	38.2
Group 3 DI+TR+ CA	6	1	0	0.0%	3	0	1	33.3%	33.3
Group 4 DI+CA	4	0	0	0.0%	3	0	1	33.3%	33.3
Total	48	1	4	8.3%	68	14	28	40.6%	32.2

PI: Infringements, DI: Dialog, TR: Tri-folds and CA: Letter

In general, the percentage of infringement remediation or correction rose from 8.3% in 2018 to 40.6% in 2019, which is attributable to the use of Dialogues, Tri-Folds and Letters.

As for the results between groups, group 1 -those to whom the benefits of correction were explained only through dialogue- shows an increase of 23.8 percentage points in the remediation rate.

However, it should be noted that this group may be more willing to correct since it had the highest rate of all the other groups in 2018.

In group 2, the correction rate increased by 38.2 percentage points after applying the dialogue activity and handing out the explanatory tri-fold. This would indicate that the effect is greater when not only the dialogue but also the tri-fold are applied, , which shows that the supervised party takes the information into account in a better way when it is transmitted both orally and in writing.

Although the results show an improvement in the cure rate in the four groups, it is still less than 50% for both years (8.3% for 2018 and 40.6% for 2019) in the Auditable Units within the experiment.

One possible explanation for this is decision-making bottlenecks in, which is reflected in groups 3 and 4 where the information letter was sent. In those cases, although the field workers received information about the benefits of remediating, it is not possible to effectively ensure contact with the company's legal or management area by issuing letters, so there may have been problems in transmitting information.

On the other hand, remediating implies accepting a breach, so perhaps the legal area or management has not agreed to accept the error or liability implied by a remediation and has preferred to initiate an administrative procedure. Consequently, it is recommended to repeat the experiment ensuring that the recipients of written communication are the companies' general managers.

8. Institutionality

Due to the positive impacts generated in the experiment application , it is proposed that the activities developed during the experiment that generated a greater impact, be included, that is, dialogue and trifold use in all field supervisions carried out by OEFA Supervision Directorates, since these activities are developed at a minimum cost for the administration and are effective to achieve the proposed objective, namely, to increase the remediation and correction percentage of noncompliances detected in the supervision.

In this sense, it is proposed that the "Environmental Supervision Management and Process Manual be modified in order to include a reference to the dialogue the supervisor must have with company representatives they interact with during field actions, as part of the supervision minutes that depicts the infringements and expounds the benefits of remediation. Said Manual, which must be delivered at the time of signing the supervision minutes, includes the tri- fold as a format in it.

9. References

EPA (1998). *Enforcement Rolein the 33/50 Program (Industrial Toxics Project).* EPA: Washington D.C.

Madein, A. y Sholihin, M. (2015). *The impact of social and environmental information on managers' decisions: Experimental evidence from Indonesia.* Asian Review of Accounting, 23, (2), 156-169.

OCDE (2017), *Tackling Environmental Problems with the Help of Behavioural Insights,* OECD Publishing: Paris.

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Wright, W.; Eppink, F. y Greenhalgh, S. (2017). *Are ecosystem service studies presenting the right information for decision making?* Ecosystem Services, 25, 128-139.

Wu, T. y Seidmann, A. (2018). *Can irrelevant benchmark information help when making business decisions under uncertainty? An empirical investigation of the newsvendor game.* Decision Support Systems, 107, 40-51

Annexes N.º 1

Informative tri-fold referring to the benefits of remediation

How do I demonstrate the remediation?

Submitting a clear and accurate technical report with information prior to and after implementing the remediation or correction activities in the specific area in the supervisory act minutes, including the environmental component involved

Photographs and/or videos should be attached that clearly demonstrate the activities carried out. This material must include date, time, and coordinates (WGS84).

In the event of test reports, the methods must be accredited, as appropriate, by demonstrating the performed remediation, cleaning and/or sampling.

In case hazardous waste is to be transported, transportation records following the remediation or correction actions must be attached.

¡Remember!

The remediation or correction must always be accredited to the OEFA by submitting appropriate evidence at OEFA's discretion. Ask your supervisor.

If you remediate, we all win!

Questions?

Coordination of Environmental Supervision in Mining - Directorate of Environmental Supervision in Energy and Mines.

Av. Faustino Sánchez Carrión Nº. 603, 607 and 615
Jesús María, Lima.

Phone: 204-9900
Toll free: 0800 100 58
204-9975 / 204-9278 / 204-9979
consultas@oefa.gob.pe

www.oefa.gob.pe

El Perú Primero

March, 2019

Oefa Organismo de Evaluación y Fiscalización Ambiental

Annexes N.º 2

Information letter to the administrations regarding the benefits of the correction

PERÚ | Ministerio del Ambiente Environment | Oficina de Evaluación y Fiscalización Ambiental - OEFA | Dirección de Supervisión Ambiental en Energía y Minas

Decade of equal opportunity for women and men
Year of the fight against corruption and impunity

Jesus María,

LETTER N° -2019-OEFA/DSEM

Messrs
[COMPANY NAME]
[Address]
To: General Directorate
[District].-

Case File N° -2019-DSEM-CMIN

Subject: Remediation Accreditation

Dear Sir/Madam,

I am pleased to address you regarding the supervisory action taken from [start and end date of supervision] to auditable unit [Name of the Unit], in which facts have been verified, from which alleged infringements could be implied.

In this regard, we remind you that your company may access the following benefits if it remedies and/or corrects the identified alleged infringements:[1]

Before initiation of an Sanctioning Administrative Procedure:

Case is dismissed

By remediating during supervision or correcting a slight infringement

40% discount

In the sanction, by remediating a serious infringement.

After initiation of a Sanctioning Administrative Procedure:

20% discount

In the sanction, by remediating a minor or serious infringement.

For more information, contact Mr./Ms. [Name of Activity Coordinator], to [mail] or to the annex [phone number].

Best regards

Director of the Directorate of Environmental Supervision in Energy and Mines
Environmental Assessment and Control Agency - OEFA

[1] Remember that, in order to prove remediation or correction, you must provide clear and concise information, such as: (i) Clear and accurate technical reports, with information on the before and after you have implemented correction activities in the areas specified in the supervisory act, including the environmental component involved. (ii) Photographs and/or videos should be attached to clearly demonstrate the activities carried out. This material must have date, time, and coordinates (WGS84). (iii) If test reports are required, the methods must be accredited, as appropriate, by demonstrating the remediation, cleaning and/or sampling performed. (iv) Where hazardous waste is to be transported, the transportation records following the remediation or correction actions must be attached.

Version: 01

Choose an item.
www.oefa.gob.pe

Av. Faustino Sánchez Carrión
No. 603, 607 and 615 - Jesús María
Lima, Peru
Telegraph: (511) 204 9900

Bios

Franklin Aguilar Salvador
Bachelor's Degree in Economics from Pontificia Universidad Católica del Perú. He currently works for the Coordination of Deconcentrated Offices.

Jericó Fiestas Flores
Economist from Universidad del Pacífico and Master in Ecological Economics by Universidad Autónoma de Barcelona. He has experience in research related to environmental control, conservation of natural protected areas and the transformation of food systems. He is currently a PhD student in agricultural and natural resource economics at the University of Alberta.

Juan Carlos Neira Campos
An economist at Universidad Nacional de Trujillo, with a Master's degree in Economics from Pontificia Universidad Católica del Perú, he is an Economic Specialist in the Directorate of Environmental Supervision in Energy and Mines.

Claudia Oscco Gaspar
A manager by Universidad Nacional Federico Villareal , she has a Master's degree in Public Management from Universidad Mayor de San Marcos. She has experience in process management, organization and methods, information analysis and project management. She is currently in charge of the coordinating Systematization, Statistics and Process Optimization at OEFA's Directorate of Policies and Strategies in Environmental Control.

Tessy Torres Sánchez
A lawyer from Universidad Católica del Perú, she holds a Master's Degree in Public Administration from Universidad Ortega y Gasset Research Institute. She is currently OEFA's Chair of the Board of Directors.

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Credits

Editing:
Karina Montes Tapia

Proof-reading:
Sara Chávez Urbina ✞

Recognition of environmental responsibility:
towards an effective communication that simplifies auditing

1. Problem

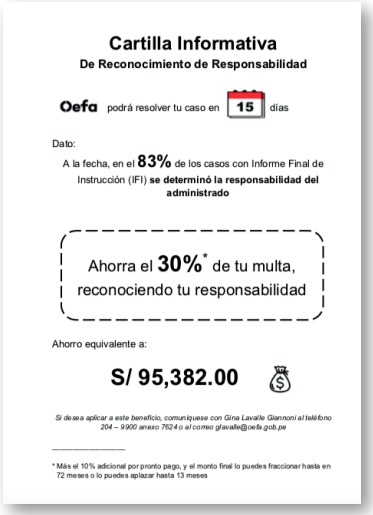
Low rate of recognition of responsibility from the administered in non-compliance enviromental events.

1.4%

Of the files that started an Administrative Penalty Process were voluntarily remedied.

2. Design and implementation of the strategy

Profit framing and effective communication: primer with relevant information about the recognition of responsibility



Cartilla Informativa
De Reconocimiento de Responsabilidad

Oefa podrá resolver tu caso en 15 días

Dato:
A la fecha, en el **83%** de los casos con Informe Final de Instrucción (IFI) **se determinó la responsabilidad del administrado**

Ahorra el **30%*** de tu multa, reconociendo tu responsabilidad

Ahorro equivalente a:

S/ 95,382.00

Si desea aplicar a este beneficio, comuníquese con Gina Lavalle Giannoni al teléfono 204 – 9900 anexo 7624 o al correo glavalle@oefa.gob.pe

* Más el 10% adicional por pronto pago, y el monto final lo puedes fraccionar hasta en 72 meses o lo puedes aplazar hasta 13 meses

Information about the Administrative Penalty Process

Information about benefits for recognition

3. Results

Increase in the recognition rate of responsibility from the administered in the event of environmental breaches:

Subsector	Before	After
Mining	0%	35%
Electricity	11%	15%
Fishing	5%	12%
minor hydrocarbons	3%	6%

2018 — 2019 — 2020

Benefits of recognizing environmental responsibility:

For the administered:

- Penalty savings (between 30% and 50%)
- Time
- Staff time

Simplification of the inspection

- Time
- Staff time
- Answer

For the: Oefa

Recognition of environmental responsibility: towards an effective communication that simplifies auditing

Stefany Monzón Morillas, Marcos Yui Punin

August, 2020

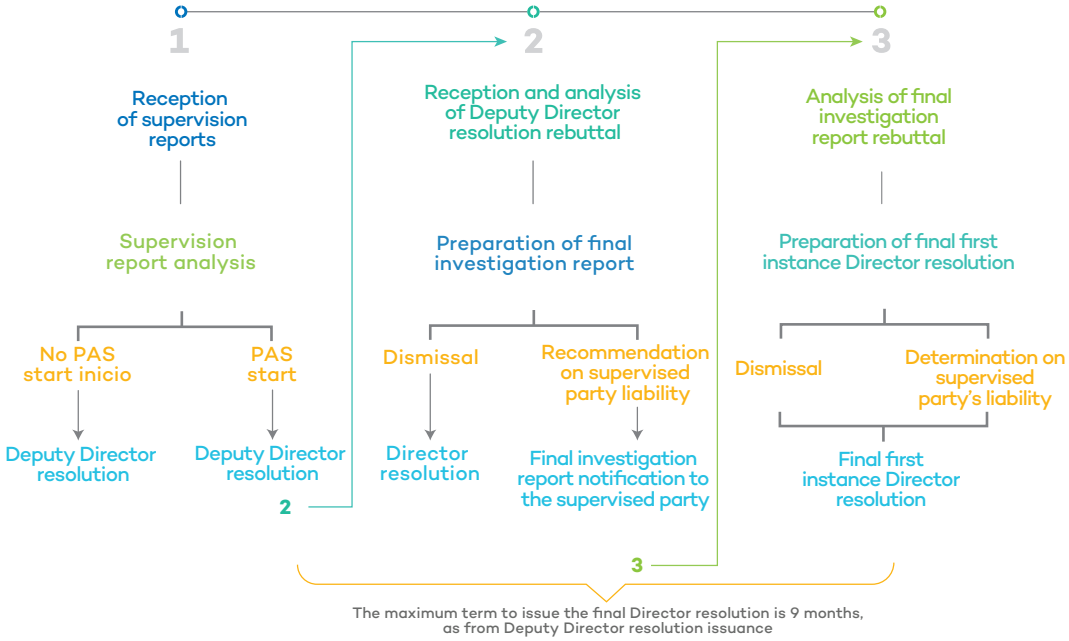
1. Problem description and intervention recipients

As part of the macro process carried out by the Agency for Environmental Assessment and Control (OEFA), the Supervisory Authority carries out actions aimed at verifying company compliance with environmental regulations during the development of their economic activities.

These actions, in turn, are detailed in a Supervision Report in which alleged regulation breaches by supervised parties are analyzed and determined. The reports are sent to the Directorate of Control and Application of Incentives (DFAI by its acronym in Spanish) for its evaluation and, if deemed pertinent, it initiates an Administrative Sanctioning Procedure (hereinafter, PAS by its acronym in Spanish).

The PAS begins with a notice from the Investigating Authority to the supervised party at the beginning of the procedure, informing it of the facts that could be considered as an an infraction; in turn, the supervised party can submit its rebuttals or allegations, which are analyzed by the Deciding Authority in a further pronouncement establishing supervised party liability and infraction (and a corresponding sanction as the case may be), or procedure dismissal.

Graph N.º 1
OEFA Control Process



Source: Oefa (2019)
Prepared by the authors

Fact evaluation and legal analysis by the Authority to establish supervised party liability in the infractions imputed to them are very important, since the PAS conclusion depends on this process.

This task can be complex depending on the number of imputed infractions that each procedure contains, and the technical skills needed to determine them. In addition, it has a limitation: the legally established deadlines for issuing the corresponding pronouncements. Therefore, its analysis requires a large amount of human and financial resources, as well as time.

1.1. The problem in figures

Supervision processes by the OEFA until 2018 have generated a procedural burden for the DFAI because of the 3,432 PAS cases[1] it has to deal with. These are based on likely breaches of environmental regulations by the companies (supervised parties) overseen by the OEFA. Likewise, 75% of these cases started the PAS, while 25% were dismissed at the DFAI.

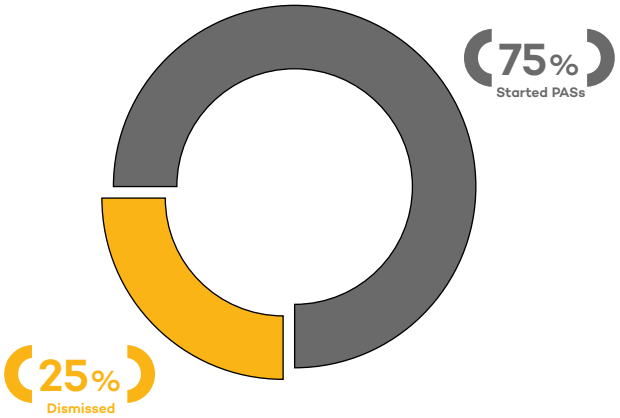
On the other hand, according to the amendments to the Law on General Administrative Procedure[2], Article 13 of the Regulation on the Administrative Sanctioning Procedure by OEFA, approved by Board of Directors Resolution No. 027-2017-OEFA/CD, specifies the benefit the supervised party can obtain if they decide to recognize their liability regarding an infraction. Such benefits depend on the opportunity in which said recognition is submitted, as follows:

Chart N.º 1
Recognition opportunities and fine reduction

Recognition opportunities	Fine reduction
First opportunity: From the start of the Sanctioning Administrative Procedure (PAS) to the submission of rebuttal to imputation of charges.	50%
Second opportunity: From submission of rebuttal to imputation of charges until before Final Resolution is issued.	30%

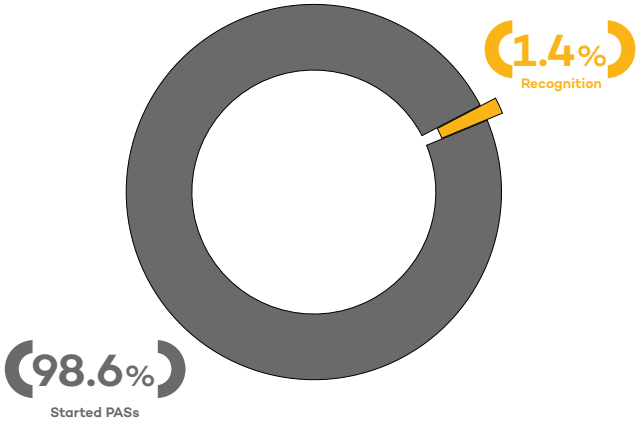
Despite the incentives established in the regulation, only 37 out of the 2,559 Deputy Director Resolutions that started PASs recognized their liability in 2018. This accounts for 1.4% of PASs' started cases. This number can be deemed as low if we consider that liability is confirmed in 83% of started PASs.

Graph N.º 2
Subdirectorate resolutions, by sense of resolution to the IV quarter of 2018



Source and preparation by: OEFA in figures, 4Q 2018.

Graph Nº 3
Recognition in 2018 per total RSD that started PASs



Source: DFAI

Failure to recognize liability leads to generating an increase of procedural burden for OEFA and, together with that, an increase in the

1. Estimate according to number of Deputy Director Resolutions issued in 2018, (OEFA 2019)
2. The following are extenuating conditions regarding liability for infractions:
   a) If the infringing party recognizes its liability expressly and in writing once the sanctioning administrative procedure is started, in those cases in which the applicable sanction is a fine it will be reduced to an amount of no less than half of the sum.

amount of resources necessary to process the cases. In turn, for the supervised party, recognition might generate fine and sanction reduction benefits, as mentioned above. Liability is confirmed in 83% of PASs according to institutional statistics. However, only 1.4% recognizes liability.

Therefore, it is necessary to promote the use of mechanisms to help with efficient resolution of these procedures, and one of them is liability recognition by supervised parties.

1.2. Intervention recipients

The intervention is applied to supervised parties who must evaluate imputed facts and choose between recognizing their liability or submitting their rebuttal and defend themselves from imputed breaches. Supervised parties who decide to recognize their liability regarding an infraction, significantly facilitate pronouncement by the authority to the extent that they decrease administrative complexity, because the authority will allocate less resources (human, financial and time) to establish said liability, since the supervised party admits to it.

In that regard, the intervention will be addressed to supervised parties in PASs of all economic sectors in which OEFA is competent, whose cases are not framed within Law 30230[3] and who would have to pay a fine as sanction for the committed breach.

The analysis undertaken by a supervised party to decide on recognition includes several aspects, which may be conditioned by:

- conscious position of not considering oneself liable of infringement,
- analysis of implications ensued from recognition of liability from a social or reputational impact on the institutional image perspectives,
- juridical strategy of the legal area in charge of the PAS.

2. Recipient behavior description

According to presented statistics, there is low use of the benefits established in the regulation concerning recognition of liability. For the purpose of this study, we will assume that there are factors related to supervised party behavior that affect such recognition and deviate their behavior[4], according to biases studied by behavioral economics:

(1) Loss aversion bias,
(2) Status quo bias,
(3) Framing effect and cognitive overload
(4) Hassle factors.

Loss aversion bias is the tendency in supervised parties to feel more discontentment due to suffering a loss in their capital stemming from paying a fine. In such circumstance, the supervised parties prefer to bet on the possibility of a change in administrative decision, instead of paying a lesser sanction amount.

The status quo bias is the tendency to keep things in their current state. In this case, the supervised party prefers not to make an additional effort by recognizing their liability. Oftentimes, they opt for the "predetermined" behavior and not because it intrinsically generates more well-being. Likewise, supervised parties can also be convinced that they are not guilty and hence they opt for not taking action.

The framing and cognitive overload effect refers to presenting the liability recognition option as less attractive for supervised parties, because the text is excessively legal and not very clear, which implies greater effort for understanding the message.

Hassle factors are those that hamper recognition by supervised parties. They can go from information drafting, its length or the need for additional actions to activate the decision.

3. Law that establishes tax measures, procedure simplification and permits for promoting and dynamizing investment in the country
4. Thaler, R. H., & Sunstein, C. (2008).

3. Strategy

Along this line, the strategy consists of strengthening communication so as to mitigate the effect of aforementioned biases. To do so an annexed document is proposed to be attached to the investigation final report notification. This annex is an information sheet that provides supervised parties with relevant knowledge concerning the imputations for which they might be sanctioned and the benefits they can obtain if they recognize liability. This disseminates current regulation and the benefits they can get in such a case.

Graph N.º 4
Information Sheet

++ This is an example of information sheet design. Amounts referred to savings vary according to each case.

Therefore, the nudge this information sheet uses is intended to have decision makers recognize their liability within the period when they can express their decision of adopting the proposed benefit (namely before OEFA issues its final resolution), additionally, the deciding authority gets more precise information on behaviors to be sanctioned and prepares an estimate of the sanctioned amount for each PAS.

To do so a traditional tool from neoclassic economics was applied. The earnings are framed through an informative intervention that seeks to enhance positive aspects[5] regarding the decision to recognize responsibility, aiming at presenting a more attractive option and dealing with supervised party behavior biases[6]. In this regard, the relevant information in the sheet includes:

- The days in which OEFA can resolve the case or determine the supervised parties' liability regarding an infraction. In this way, supervised parties can get an economic benefit for recognizing their infraction, because OEFA will end up by determining said liability any way.

- The high success percentage that OEFA has to determine supervised party liability regarding an infraction. (Supervised party liability was found in 83%[7] of cases with Final Investigation Report (IFI))

- The amount of money (in S/.) that supervised parties can save[8], if they recognize liability regarding an infraction before OEFA.

Likewise, supervised parties can recognize their liability before OEFA or not, notwithstanding the fact that this information sheet is sent, as corresponds to soft paternalism[9] on which public intervention nudges are based.

5. According to Service et al. (2018).
6. Biases: (1) loss aversion bias, (2) status quo bias, (3) framing and cognitive overload bias, and (4) hassle factors.
7. Average percentage estimated by the DFAI concerning issued Directorate Resolutions.
8. Amount obtained from the Final Instruction Report estimated by DFAI in each PAS.
9. According to Thaler & Sunstein (2008), "*Taking and expression from the late Milton Friedman, soft paternalists want the people to be "free to choose." We aspire to design policies that keep or increase freedom of choice* (...). Soft paternalism is relatively weak and it does not mean intromission, because options are not blocked or removed, nor significantly taxed." See Thaler & Sustein (2006) for more information.

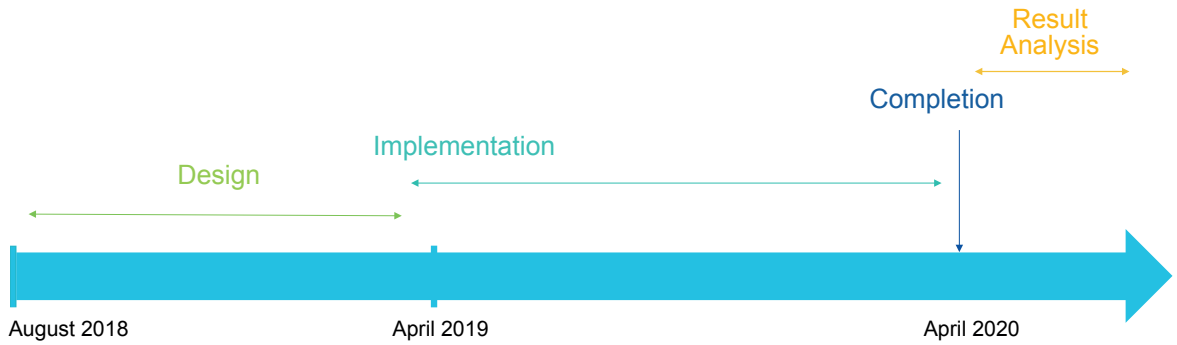
4. Experimentation

a. Implementation

Intervention implementation started in August 2018 with identification and prioritization of the issue discussed above, which we intend to solve with behavioral economics tools. Different solution alternatives were designed until March 2019. The issued information sheet that is attached to the report that notifies supervised parties about the IFI is the nudge, as presented above.

The experiment comprised the period from April 2019 to April 2020. It consisted of attaching said information sheet in a visible place, added to the report with which supervised parties are usually notified about the IFI. This information sheet was not attached to all cases. It was only added to cases within the experiment treatment group. We have evaluated the results of this experiment since April 2020.

Graph N.º 5
Intervention process



The process to identify the treatment group was totally random. It depended on the type of numbering IFIs get -either as odd or even- as they are notified to supervised parties. Therefore, the cases which had an even number got the information sheet besides the documents usually contained in such notice. Meanwhile, IFIs that had an odd number did not attach said information sheet.

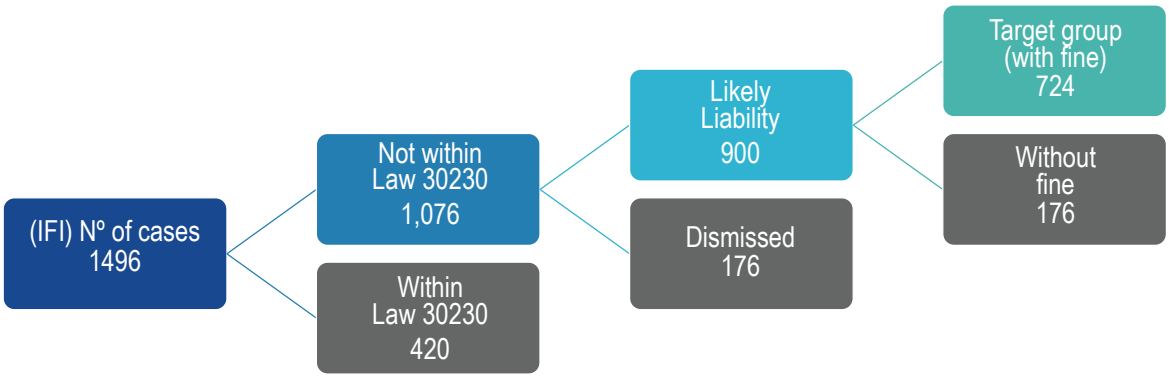
Chart N.º 2
Control group and treatment group documents

Control Group	Treatment Group
• Notification document • Liability recognition form • Final Investigation Report (with odd number)	• Notification document • **Information sheet** • Liability recognition form • Final Investigation Report (with even number)

Given the fact that the information sheet includes information related with the savings from the likely fine to supervised parties, it was necessary to include cases in which supervised parties had to pay a fine. Therefore, we excluded cases corresponding to Law 30230, those cases which had dismissal notices, and those that did not include a fine as sanction.

Out of the 1496 IFIs issued during the experimentation year, 1076 were not framed in Law 30230. Once these were excluded – namely, the 176 IFIs that recommended to dismiss the PAS and the 176 which had no fine as sanction- the target group included 724 IFIs.

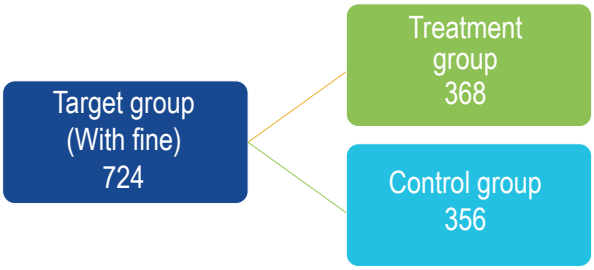
Graph N.º 6
Experiment universe and target group



Source: DFAI.

Out of the 724 IFIs that make up the target group, 50.8% had an even number, which corresponded to the treatment group that is 368 IFIs, which had the information sheet attached. The difference makes up the control group with 356 IFIs.

Graph N.º 7
Experiment target group, control group and treatment group



Source: DFAI

b. Limitations

One of the likely limitations to implement the intervention is the possibility of notifying the company's top managers about the information sheet, so they make the decision of recognizing their company's liability, because since the established benefit is decrease of the fine amount, these are the managers that should be the most motivated to evaluate the proposal.

The difficulty is that oftentimes supervised parties fix judicial domicile of the legal firms that represent them as theirs, or they also do so with their attorneys' domicile, and a few of these are legally entitled to recognize the company's liability concerning the imputed infraction.

On the other hand there might be external factors related with the company's image that would prevent adopting the decision of recognizing liability in their infractions, because said recognition might have a negative impact in the company's social relationships with neighboring communities, and in their performance in financial markets.

The supervised parties' personnel might face a similar dilemma, considering that recognizing liability might lead to seek individual liability and, consequently, application of some kind of sanction to employees.

5. Results[10]

a. Baseline

Considering 2018 facts as baseline, we can draw the following differences between what was recorded before the intervention and after the intervention, thanks to the remittance of the information sheet.

10. Visible results in the following dashboard: https://datastudio.google.com/reporting/cefac9bf-a471-450d-9d5f-795c9a76a238

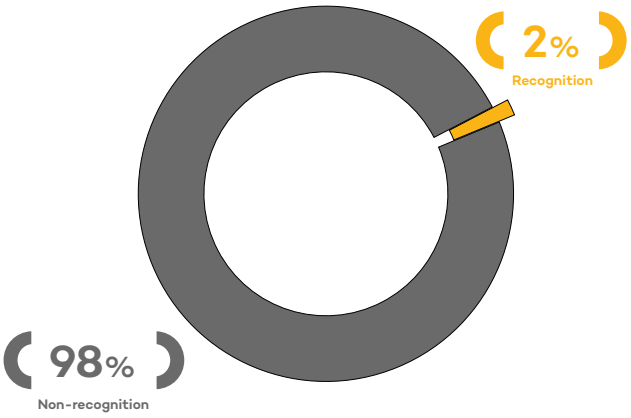
During 2018, as was formerly mentioned, recognition occurred in 1.4% of cases, taking the number of deputy director resolutions that start PASs as reference. Now, if we consider this same analysis for the intervention period, we see that the recognition percentage increased to 2%, which meant a 37.9% variation as compared to the baseline.

Table N.º 1
Recognition percentage during 2018 and during the intervention period, per RSD starting a PAS

Period	RSD starting a PAS	Recognition	Percentage of recognition
2018	2,559	37	1.4%
Intervention*	1,705	34	2.0%

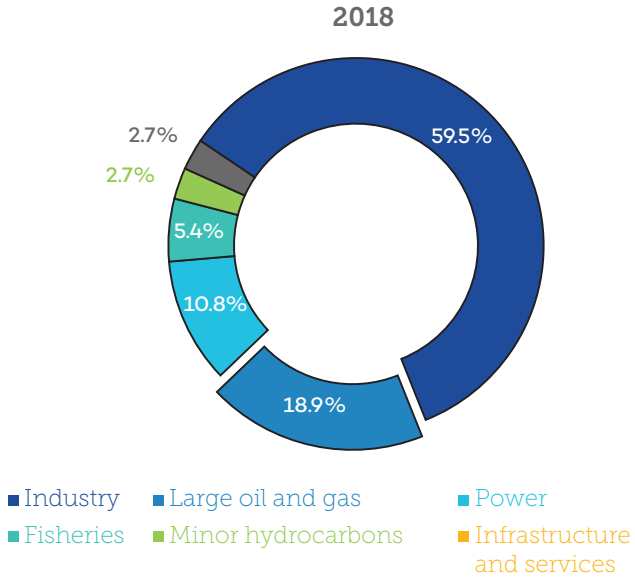
* Period from April 2019 to April 2020

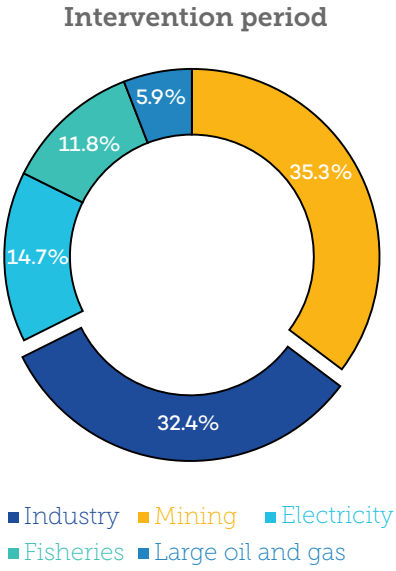
Graph Nº 8
Intervention Period: Recognition per total RSD that started PASs



Source: DFAI

Graph N.º 9
Recognition per sector during 2018 and during the intervention period





Source: DFAI

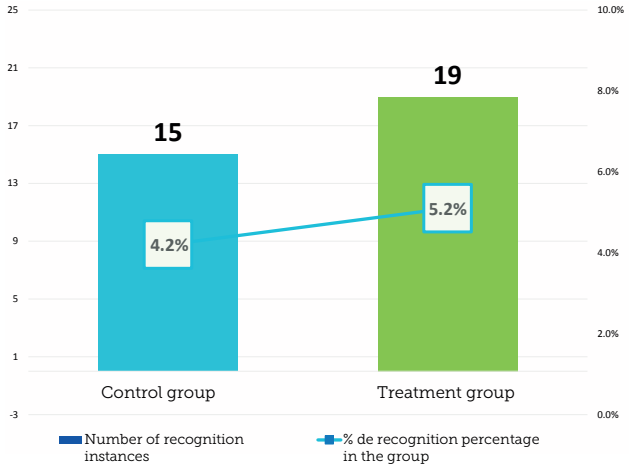
On the other hand, as to recognition cases by sector, there were none for the mining sector in 2018; while it was the main one that adopted recognition during the intervention period. This shows that the recognition has not maintained the same trend per sector.

b. Treatment and control groups

When treatment and control groups are compared, the treatment group is found to record a larger number of cases in which liability is recognized (+ 26.7%). Results

evidenced 15 liability recognition instances in the control group, which account for 4.2% of all the cases in this group. Meanwhile there were 19 recognition instances in the treatment group, which accounted for 5.2% of cases in that group.

Graph N.º 10
Recognition and cases, per control and treatment group



Source: DFAI

Although there is an increase in the recognition percentage, one cannot conclude that this is statistically significant, due to the low number of observations and the small difference in recognition percentage between the control and treatment group

.

Table N.º 2
Recognition percentage during the intervention period

Group	Cases	Recognition	Recognition percentage
Control	356	15	4.2%
Treatment	368	19	5.2%

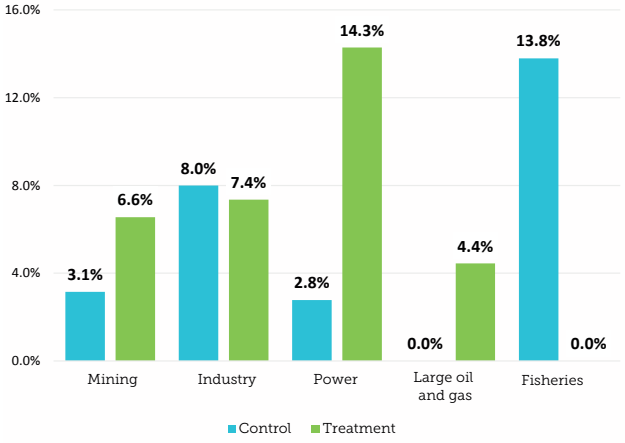
Concerning the main sectors, the out of the cases in the target group 34.4% belonged to the mining sector, while 19.8% to the industrial sector, as was mentioned before. Now, the following was observed when the analysis breaks down the target group between treatment and control groups:

- The number of cases recognized in the treatment group by the mining sector as compared to all the cases in their group is twice as much the recognition seen in the control group.

- Meanwhile, the number of recognized cases in the industrial sector showed a similar percentage in both groups.

- The power and large oil and gas sectors have shown more recognition in the treatment group than in the control group, but to a lesser extent.

Graph N.º 11
Recognition per sector (% of total cases per group)



Source: DFAI

The largest impact of the intervention is particularly recognition in the mining sector. This is also confirmed by evidence presented in the former section about new recognition instances in this sector as compared to 2018.

Other differences between the control and treatment group have to do with the relationship between supervised parties that recognize liability with social-environmental cases and type of company according to size.

The following table shows the main differences between analyzed groups:

Chart N.º 3
Control and treatment group comparison

Control group	Treatment group
3.1% of recognition corresponds to the mining sector.	6.6% of recognition corresponds to the mining sector
8% of recognition corresponds to the industry sector	7.4% of recognition corresponds to the industry sector
2.8% of recognition corresponds to the power industry	14.3% of recognition corresponds to the power industry
There was no recognition in the large oil and gas companies	4.4% of recognition corresponds to the large oil and gas sector
13.8% of recognition corresponds to the fisheries sector	There was no recognition in the fisheries sector
Out of all recognition instances, 35.7% of supervised parties were related to some social-environmental conflict	Out of all recognition instances, 56.3% of the companies were related to some socio-environmental conflict
Out of all recognition instances, 50% of the companies were considered as "Very large"[11]	Out of all recognition instances, 56% of the companies were considered as "Very large"

6. Institutionality

When comparing recognition in 2018 —the baseline— to the study period when the nudge was applied, there is an increase from 1.4% to 2%. This shows that the nudge effect is limited, because companies opted for exercising their right to appeal in 98% of PASs

Likewise, the inter-group analysis shows that attaching the information sheet in the treatment group documents has shown a slightly higher performance as compared to the control group, which had no nudge. However, according to available data, it is not possible to determine statistical significance. Likewise, this information does not consider other important external factors which can determine the decision of supervised parties to recognize liability or not.

Therefore, despite an increase in recognition, decision making in most supervised parties is not affected by the cognitive biases defined by behavioral economics or, at least, the nudge and strategy applied in this research are not relevant concerning these biases.

We recommend new experiments to promote liability recognition, because the limiting factors identified in this research can be improved.

On the other hand, the current national emergency situation should be taken into account, since environmental compliance can be promoted through non-coercive actions by OEFA, such as corrective measures, remediation of infringements, among others. The fine can be left as the last recourse, as a sanction to disincentivize infraction behavior. In this regard the information sheet provides relevant information concerning the infraction. Therefore, it might not be a priority option to promote environmental compliance in the following months.

Likewise, the DFAI needs to undertake a comparative analysis to determine the most efficient way of using its resources, by evaluating the most efficient option for applying a nudge in comparison to the resources they do not use as a result of said recognition.

11. Annual increase larger than 3000 UIT.

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Bios

Stefany Monzón Morillas
An economist by Universidad Nacional Mayor de San Marcos and a Master of Economics, specialized on Public Management and Policies by the same university, she currently performs as economics specialist at OEFA's Board of Directors Chair and she is Technical Secretary of the Behavioral Economics Workgroup — BE OEFA.

Marcos Yui Punin
An economist with more than 10 years of experience in public management, emphasizing economic analysis for law enforcement within the framework of sanctioning administrative procedure in control entities, he is currently a judge of the OEFA tribunal specialized in Mining, Power, Fisheries and Manufacturing.

Research Assistants:
Luis Willian Espejo Céspedes
Yamila Naysha Reyes Sánchez

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Ener Henry Chuquisengo Picon, Ricardo Oswaldo Machuca Breña, Jose Maria Mariño Tupia and the team from the Control and Application of Incentives Directorate collaborated in the preparation of this article.

Credits

Editing:
Ricardo Machuca Breña
Karina Montes Tapia

Proof-reading:
Sara Chávez Urbina

Oefa

Registration in the OEFA General Good Environmental Practices Inventory

1 Problem

Low response rate to the questionnaire of the General Inventory of Good Practices 2018:

- **5.8%**

2 Behaviour

The administered distrust the General Inventory of Good Practices 2018 survey, for being sent by the Supervision Directorate and Application of Incentives area, in charge of dictating the fines and penalties.

In addition, they have little information about the General Inventory of Good Practices 2018 survey; and the areas that receive the survey are not the ideal for deciding to complete it.

3 Strategy

The content of the letter was redesigned, the sender was changed and the recipient was precised to communicate the objective of the survey and the General Inventory of Good Practices 2019.

4 Experimentation

The objective of the General Inventory of Good Practices 2019 was communicated. The sender was the Presidency of the Council Director, and the incentive as a good collaborator of the State was granted.

5 Results

The results obtained by the General Inventory of Good Practices 2019 reflect an increase of 32.3% compared to the General Inventory of Good Practices 2019 (86 more answers).

Percentage of answer

32.3%

2018
Answers registered

2019
Respuestas registradas

Registration in the OEFA General Good Environmental Practices Inventory

Lucía Landa Sotomayor, Ramiz Martínez Polo

August, 2020

1. Problem description and intervention recipient

1.1. General context

According to the General Environment Law, exercising any economic or service activity that complies with all the environmental regulations or obligations which the entity has committed to in its environmental management instrument are considered Good Environmental Practices.

Likewise, the measures or processes by own initiative that are implemented and executed aiming at reducing and/or preventing environmental pollution and degradation of natural resources are considered behaviors to be awarded with incentives, when they go beyond applicable regulations or competent authority's requirements and respond to the objective of protecting the environment.

The Incentive Regime implemented by the Environmental Evaluation and Control Organism (OEFA), acknowledges supervised parties who develop environmental practices aimed at preventing and / or reducing negative impacts in the environment to a greater extent than what environmental regulations require.

This is why it is important to harmonize the definition of a Good Environmental Practice. Is it sufficient to comply with mandatory regulations? Or when is there overcompliance? These issues might discourage supervised parties from reporting their environmental practices.

Likewise, the current design of OEFA's incentive regime has requirements that limit their application scope, among which the following:

- • Having an approach aimed at evaluating the performance of controllable units and not the global performance of a supervised party, which can be made up by more than one controllable unit can lead to a contradiction between the environmental behavior in each controllable unit and the global behavior of the juridical person.

- Supervised parties who would like to participate have to be registered in the OEFA Good Environmental Practice Registry (hereinafter, RBPA). To be part of this registry, controllable units need to have gone through a supervision that certifies they do not infringe their environmental obligations.

These current considerations might limit many practices that are being implemented by supervised parties and that are not disseminated or evaluated by OEFA.

To the date of this publication with details on this experimentation, the RBPA and the granting of incentives were suspended, because it was considered necessary to evaluate their implementation and propose improvements.

1.2. Specific situation and recipients

Considering the aforementioned context, a survey was designed and distributed to supervised parties in 2018. It contained an extensive questionnaire that collected technical, economic, legal and environmental information regarding environmental practices that were being developed, including those that had already been implemented and those that had not been implemented yet.

This information was to be used for preparing a General Good Practice Inventory (hereinafter, IGBP), different from the RBPA, because it was necessary to promote improvements to the regulation of the current incentive granting scheme.

To do so, it is necessary to have information supervised parties so as to redirect the incentive regime.

In this context, 1,100 letters were sent to supervised parties in 2018, requesting information on their good environmental practices. However, only 64 responded, that is 5.8% participation.

This indicator is evaluated as a negative sign, since it is expected that in a universe of 1,100 supervised parties more than 5.8% must have good environmental practices to report.

2. Recipient behavior description

In this regard, three possible hypotheses were identified in supervised parties' behavior, which explain obtained results:

i. The questionnaire was issued by the Control, Sanction and Application of Incentives Directorate (DFAI). This area is in charge of conducting the sanctioning administrative procedure against supervised parties. This might have generated mistrust in the supervised party, due to the risk of providing information that shows breach of environmental regulations (environmental commitments and / or obligations), as a consequence of implementing desirable environmental practice.

ii. The supervised parties in question have little information about the goal for this inventory of good practices that OEFA expected to build.

iii. The persons who receive the questionnaire are not the most convenient for making decisions and / or do not have necessary information to fill in the form

3. Strategy

Considering that it was necessary to counteract the low response rate, the letter was redesigned and sent it again to get a better response rate and, thus, more information on good environmental practices.

3.1 Applied heuristics

- Scarcity: by implementing deadlines for accessing to the certification, it becomes urgent to complete the registration procedure.
- Cognitive overload: the new questionnaire is simplified and brief.
- Recognition incentive: offering a certificate of being a good collaborator with the State can generate a greater response rate.

3.2 Implementation criteria

- All natural and juridical persons under OEFA competence were considered.
- The communication content was detailed and it generated trust.
- An incentive was provided, that is, inclusion in the consulting group on Good Practice Inventory (IGBP).
- Clear and anticipated information showing requested data in a simple form, with an access link and attachment.

The 2019 strategy for this intervention is compared to that of 2018 and it shows the following differences:

Chart N.º 1
Variables

Variables					
Intervention Variables	**Group 2018**	**Group 2019**			
Format	Physical	Physical			
Envelope	Traditional envelope	Envelope with a message			
Sender	Control Director	Board Chair			
Letter content	Traditional model	New letter model			
Intervention Sub variables	**2018 Group**	**Grupo 2019-0**	**Grupo 2019-1**	**Grupo 2019-2**	**Grupo 2019-3**
Attached form	None	None	None	The form is attached	The form is attached
Receiver	None mentioned	None mentioned	Person in charge of environment	None mentioned	Person in charge of environment

The control group was made up by supervised parties that responded the form in the first communication (2018). Treatment groups are divided equitably per subsector, according to the total universe of 908 supervised parties.

4. Experimentation

Experimentation was started in 2019. The question to be answered was:

Will the response rate improve among supervised parties as a result of redesigning the message sent to carry out a general good practice inventory?

Likewise, the following question will be asked relating sub variables:

Will anticipating information and focusing attention on the survey get higher impact in participation?

Facing this, the intervention consisted of sending 908 redesigned letters to supervised parties so as to increase the number of responses on good environmental practices. The following subsectors were considered: power, oil and gas, industry, mining and fisheries.

The observation variable will be the survey response percentage. The intervention was implemented according to the following timetable:

Chart N.º 2
Timetable

Stage	Description	Time
1	Drafting and issuance of letters	5 days
2	Sending letter	18 days
3	Response reception	5 days
4	Information Processing	5 days

5. Results

Obtained results show an increase of up to 86 new practices (32.3% as compared to 2018).

Together with this, experimentation sub variables, such as anticipated information presentation (attached survey) and mention of the receiver, did not contribute to a significant differential effect.

This is confirmed because Group 2019-0 (with no survey and no mention of the recipient) got a larger response as compared to other groups.

We summarize results as follows:

Chart N.º 3
Results

Results					
Intervention variables	Group 2018	Group 2019			
Result	65	86			
Intervention sub variables	Group 2018	Group 2019-0	Group 2019-1	Group 2019-2	Group 2019-3
Result	65	29	13	23	19

Source: OEFA

Therefore, we can state that:

- Applying tools such as synthesis, prevention of cognitive overload and reciprocity increased supervised parties' responses by 32.3%.
- There was an improvement of 18 days in response time.
- The OEFA now has information about 258 practices.
- This information will help to evaluate improvement of regulations linked to the current incentive regime.
- Experience shows that supervised parties participate more when they have transparent, precise and accessible information.
- Inventory increase has been substantial and has attained 258 practices.

6. Annexes

Annexed N.º 1

Former letter specimen (2018)

Circular letter N° … -2018-OEFA/DFAI
Messrs.:
Name
Address
Ref.
Subject: Inventory of corporate practices with positive effects on the environment

Dear sir/madam,

I am pleased to write to you to cordially greet you and tell you that, as we know, there are good corporate practices that positively impact the environment in Peru.
In this regard, we are seeking to identify such practices being carried out in the country. Therefore, we invite you to share your successful experiences with us regarding implementation of good corporate practices with remarkable results in environmental obligation or current regulation compliance. This aims at acknowledging and disseminating practices that have a positive impact in the country.
To do so, please fill in the following online forms:

- If you use a Gmail account, please use this link or QR code:

https://goo.gl/forms/ZNisAxaq3IcwYqso2

- If you use other email accounts, please use this link or QR code:

https://goo.gl/forms/G3uvtuOCUA8EXbnY2

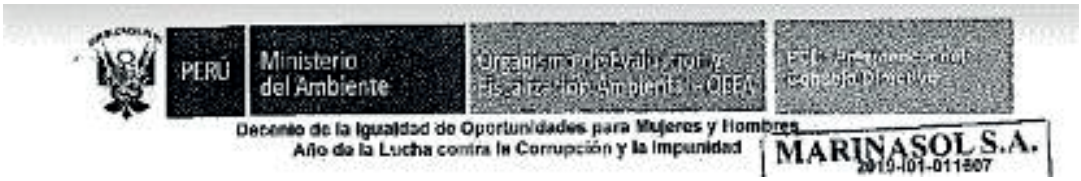
Finally, this good practice inventory will be implemented until July 15 2018. If you have any question and / or comment, please write to incentivos@oefa.gob.pe or call us to 204-9900 — Extension 7614.

Sincerely,

Eduardo Robert Melgar Córdova
Director of Control and Incentive Application
Environmental Evaluation and Control Organism

Annexe N.º 2

New letter specimen (2019)



Circular letter 00006-2019-OEFA/APCD

Lima, March 4th, 2019

Messrs.: MULTIPLE RECIPIENTS PER LIST — ANNEX 1
Ref.: Participation in redesigning the incentive granting regime to companies with good environmental practices by means of filling in a survey

Dear sir/madam,

At OEFA we are convinced that good regulation must be built openly and in a participatory way.

We are currently amending the regulation related to granting incentives as acknowledgment of good environmental practices that you carry out, and we would like to invite you to be a part of this change. In this regard, please record information about activities your company is carrying out or will implement which, in your understanding, might be considered as good environmental practices.

You can register this information in a simple form until Friday March 29th this year. By doing so, you will become part of the consulting committee to improve regulation for granting incentives to good environmental practices.

In order to access the registry, please use the following link: http://bit.do/inventarioBP

Entered information will only be informative. Therefore, it will bear no relationship with any other process in the institution.

If you have any questions, please write to incentivos@oefa.gob.pe or call us at 204-9900 – Extension 7124.

Sincerely,

Oefa

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Bios

Lucía Landa Sotomayor
Economist by Universidad Andina del Cusco, with specialization studies on environmental and natural resource economics, she is a Master candidate in Development Studies, specialized in Economics, at the Erasmus University of Rotterdam.

Ramiz Martínez Polo
Master on Environmental Technology by the Andalucia International University and the Huelva University in Spain, and Chemist by Universidad Nacional Mayor de San Marcos, he is currently an Environmental Specialist at the Directorate of Control and Application of Incentives in OEFA.

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Credits

Editing:
Karina Montes Tapia

Proof-reading:
Sara Chávez Urbina ✞

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