



BRÚJULA[®] MINERA

Diálogo con todos, riqueza de todos

2017

Mundo  Minero



CNC

Centro Nacional de Consultoría

JA&A

JAIME • ARTEAGA • & • ASOCIADOS
Sinopsis para el desarrollo

BRÚJULA MINERA DATA SHEET

MADE BY	Independent syndicated study carried out by the National Consultancy Center S.A, Jaime Arteaga and Associates and Mining World magazine
SAMPLING	<p>PUBLIC OPINION: 2.400 surveys, multichannel, distributed throughout mining and non mining communities</p> <p>EXECUTIVE MINERS: 266 executives from the mining sector.</p> <p>GOVERNMENT AUTHORITIES: 246 government officials within the management and adviser level from: Mining Authorities (ANM, Ministry of Mines, UPME and SGC); Mayor's and Governor's offices; Environmental and Control Authorities (ANLA, CAR, CGR and PGN – Ministry of Environment did not allow their officials)</p> <p>OPINION LEADERS: 161 opinion leaders within journalists, researchers, NGO's, scholars and church</p>
COLLECTION PERIOD	14th of January to the 20th of April of 2017
COLLECTION TECHNIQUE	Multichannel according to the informant preference: face to face, by phone and on-line

WHAT IS THE COST OF SOCIAL
CONFLICTS?

- Even though the mining industry employs 1% of the labor force of the world, it is the source of approximately 8% of all of the fatal accidents (Jennings, 1998).

- In Peru the estimation of an accident in the mining industry was made, it costs an average of \$30.000 USD

(Acero Rosales, 2004– Universidad de San Marcos)



COST OF SOCIAL CONFLICTIVITY

Delays caused by social conflicts in the extractive industry can signify around \$20 million USD per week, for projects which total cost ranges between the 3 and 5 Billions USD

(“Conflict translates environmental and social risk into business costs”
Centre for Social Responsibility in Mining, University of Queensland, 2017)

COST OF SOCIAL CONFLICTIVITY

In 2006, Meridian Gold, owners of the Esquel gold project in Argentina were forced to abandon their reserves for \$1.33 billions USD after a local referendum and a depreciation of \$379 millions USD of their assets.



COST OF SOCIAL CONFLICTIVITY

In 2003, the owners of the project Tambogrande in Peru, had to abandon the project with reserves valued in \$253 million USD and reported a depreciation of \$59.3 million USD of their assets



COST OF SOCIAL CONFLICTIVITY



In November of 2011, the owners of the project Minas Conga, suspended their construction by request of the Peruvian government because of conflicts with the community

The estimated deposit for the life of the project is within 15 to 20 millions of gold ounces and within 4 and 6 billions of copper ounces. The two associates, Newmont and Company Minas de Buenaventura, had spent around 2 billion USD between 2010 and 2012

COST OF SOCIAL CONFLICTIVITY



In 2014, Anglo American confirmed the necessity to restructure its project Quellaveco, which increased its cost from \$3.3 billion USD to \$ 5 billion USD due to the conflicts that emerged in the south of Peru.

ARE WE THE **ONLY SECTOR**
WITH PROBLEMS?

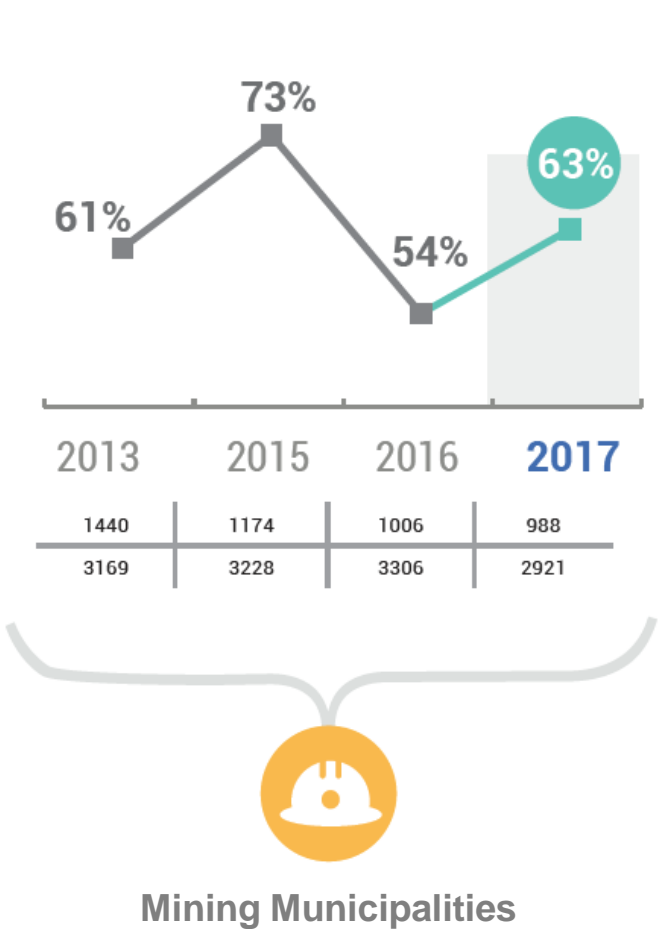
WE ALL HAVE REPUTATION CHALLENGES



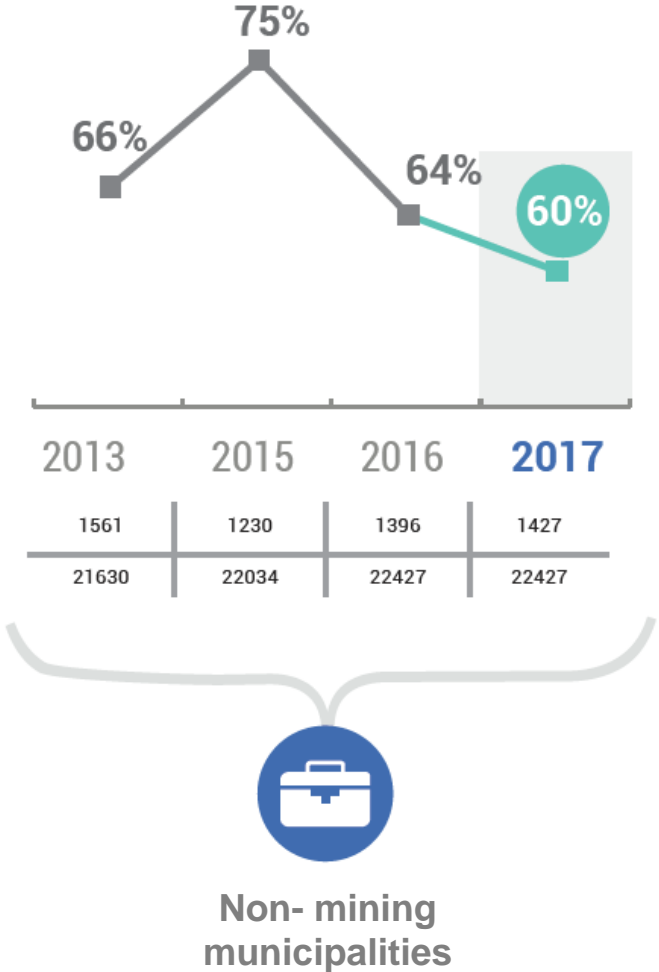
Lets put things in perspective...

Do you consider mining positive for the COUNTRY?

% Answered YES



THERE ARE DIFFERENT TRENDS BETWEEN MINING AND NON-MINING MUNICIPALITIES



From the following sectors, which is the one you consider contributes more to the **GROWTH OF THE COUNTRY?**

  Significant difference 2016-2017

Mining	
2017	2016

Non-Mining	
2017	2016

1. From the following sectors, which one do you consider..

From the following sectors, which is the one you consider contributes more to the **GROWTH OF YOUR REGION?**

  Significant difference 2016-2017

Mining	
2017	2016

Non-Mining	
2017	2016

From the following sectors, which is the one you consider **GENERATES MORE EMPLOYMENT ?**

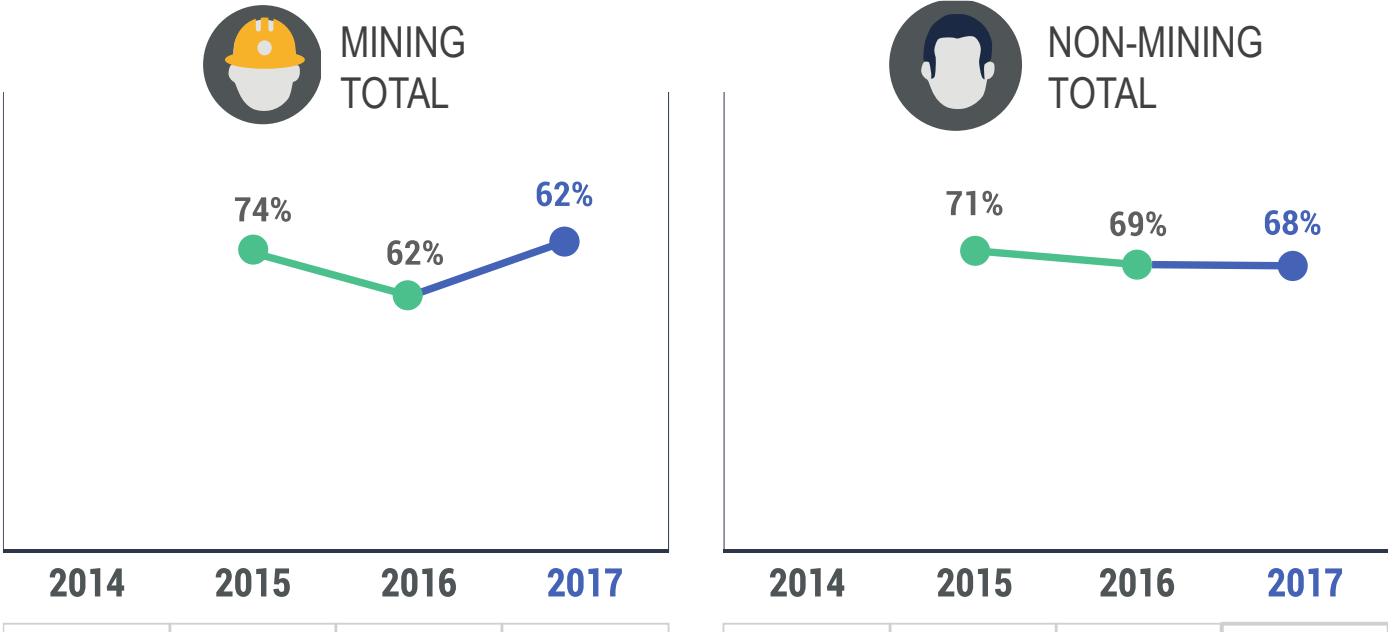
  Significant difference 2016-2017

Mining	
2017	2016

Non-Mining	
2017	2016

How much do you agree that is possible to make an ENVIRONMENTALLY FRIENDLY mining?


TTB: [5] Totally agree + [4] Agree



3. How much do you agree that is possible to have an environmentally friendly mining?

Well Now ...

From the following sectors, on which one WOULD YOU LIKE TO WORK IN THE MOST?

 Significant difference 2016-2017

Mining		Non-Mining	
2017	2016	2017	2016

From the following sectors, which one do you consider is more important to **SUPPORT THE PEACE AND RECONCILIATION PROCESS?**

 Significant difference 2016-2017

Mining		Non-Mining	
2017	2016	2017	2016

From the following sectors, which is the one that MOST AFFECTS THE ENVIRONMENT?

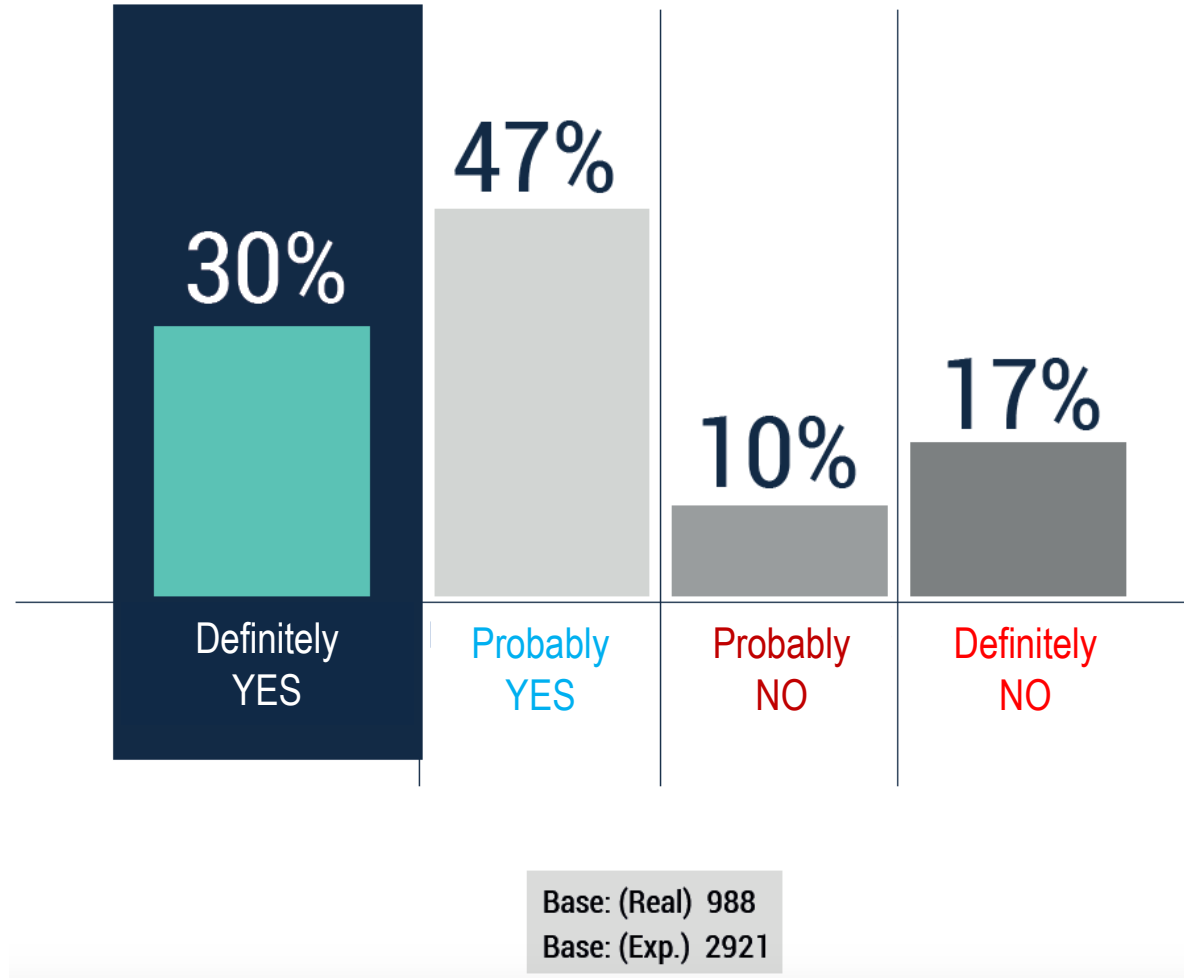
 Significant difference 2016-2017

Mining		Non-Mining	
2017	2016	2017	2016

1. From the following sectors, which one do you consider..

WHAT WOULD HAPPEN IF WE DID A
LARGE POPULAR CONSULTATION
ASKING IF WE
FORBID THE LEGAL PRODUCTION
OF MINERALS?

If your Mayor calls for a consultation about mining in your municipality, would you participate?

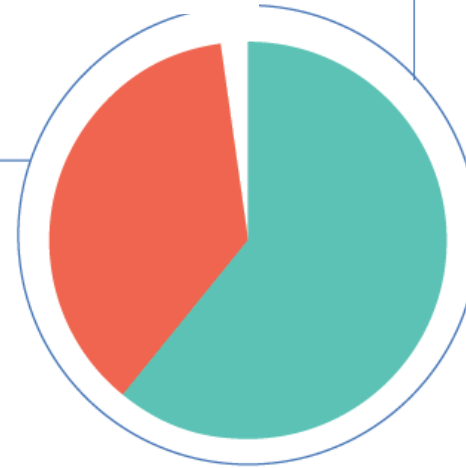


Do you agree that your municipality forbids the **LEGAL PRODUCTION OF CONSTRUCTION MATERIALS**?



Construction materials

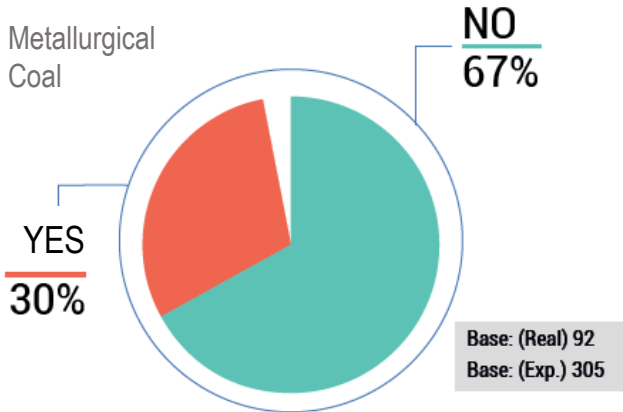
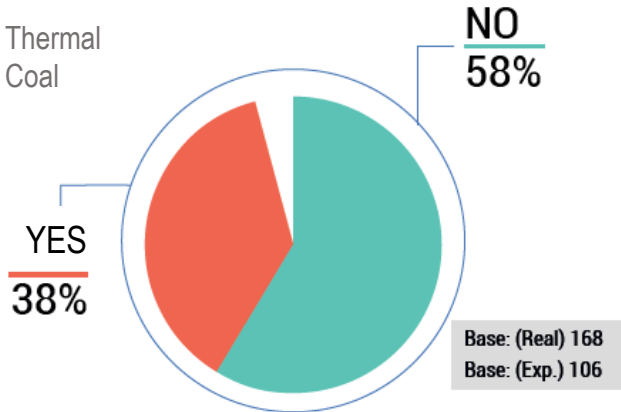
YES
37%



NO
61%

Base: (Real) 299
Base: (Exp.) 1457

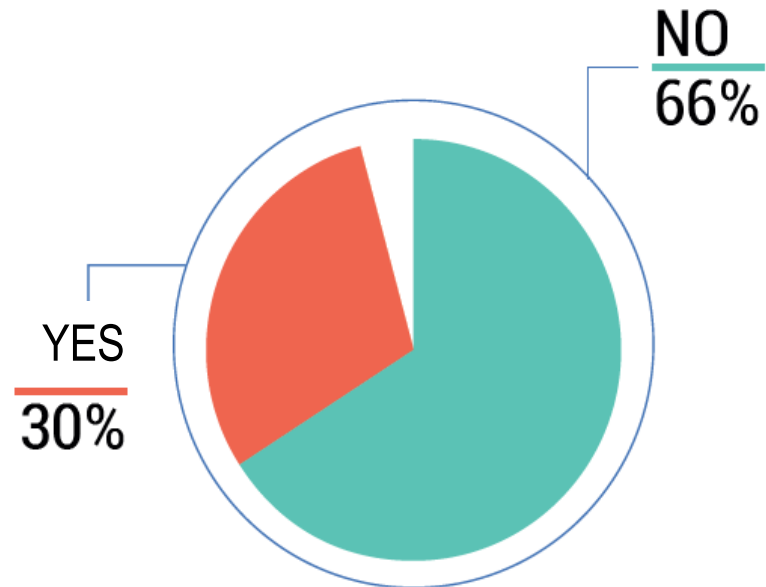
Do you agree that your municipality forbids the **LEGAL PRODUCTION OF COAL?**



Do you agree that your municipality forbids the LEGAL PRODUCTION OF GOLD AND PRECIOUS STONES?

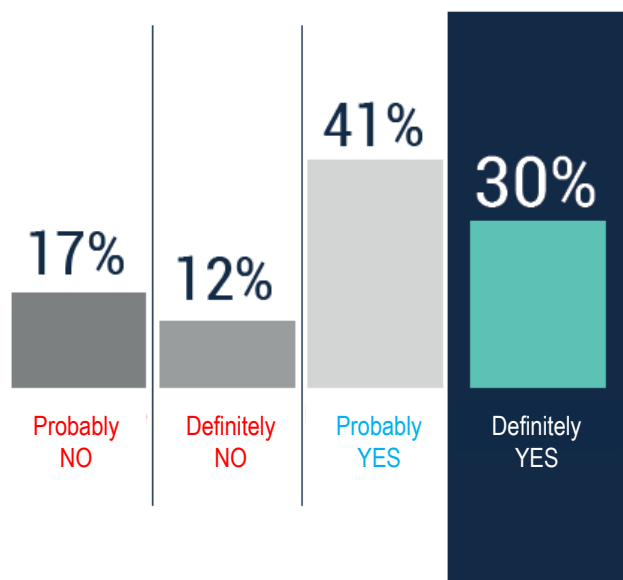


Metals and
precious stones



Base: (Real) 426
Base: (Exp.) 1050

If your Mayor calls for a consultation about mining in your municipality, would you participate?



Base Total surveyed	(Real):	2415
Base Total surveyed	(Exp.):	25348

WHY DON'T WE
ACHIEVE **SUPPORT**?

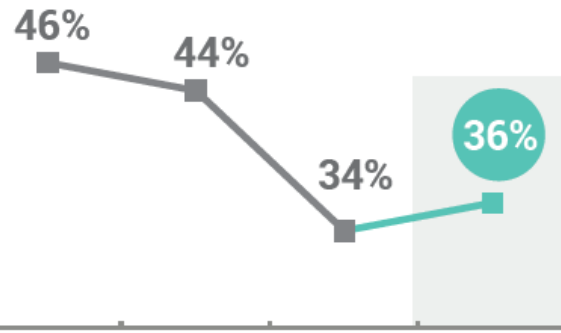
REASON 1

COMPANIES DON'T
MAKE YOU FALL IN LOVE

Do you have a positive image about MINNING COMPANIES?

% Answered YES

 Mining
Total



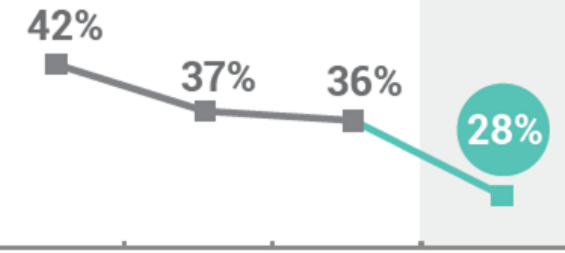
2013	2015	2016	2017
1440	1174	1006	988
3169	3228	3306	2921



Mining
Municipalities

THERE ARE
DIFFERENT
TRENDS
BETWEEN MINING
AND NON- MINING
MUNICIPALITIES

 Non- Mining
Total



2013	2015	2016	2017
1561	1230	1396	1427
21630	22034	22427	22427



Non-Mining
Municipalities

Companies profile according to the **CITIZENS**



Mining
Total



Non- Mining
Total

REASON 2

THE STATE HAS FAILED TO
GENERATE TRUST

Thinking about last year, how much has the country advanced in the following areas?

GOVERNMENT + EXECUTIVES FROM THE SECTOR

50%

How much trust do the following institutions, entities and social organizations inspire you?

Diferencia significativa  

2017 | 2016

2017 | 2016



MINING
TOTAL



NON-MINING
TOTAL

Base: (Real)	988	1008
Base: (Exp.)	2921	3306

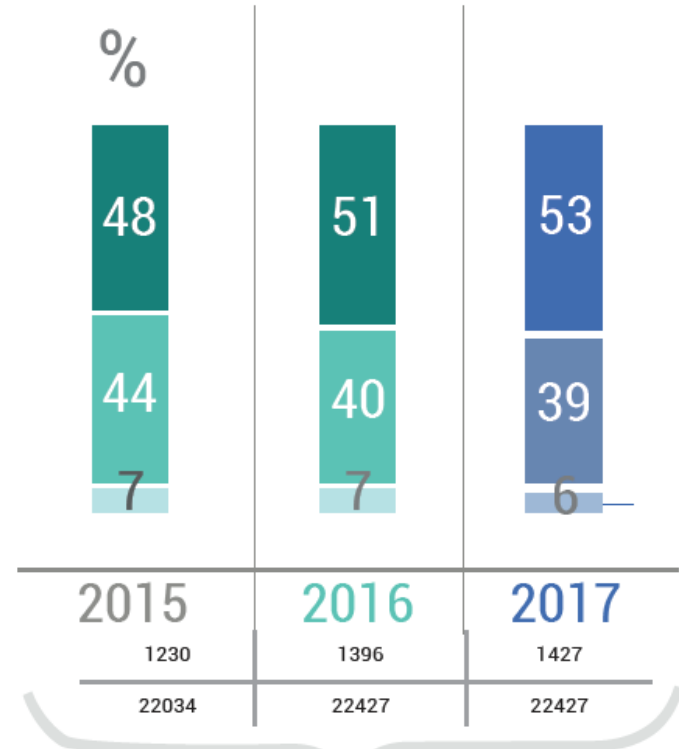
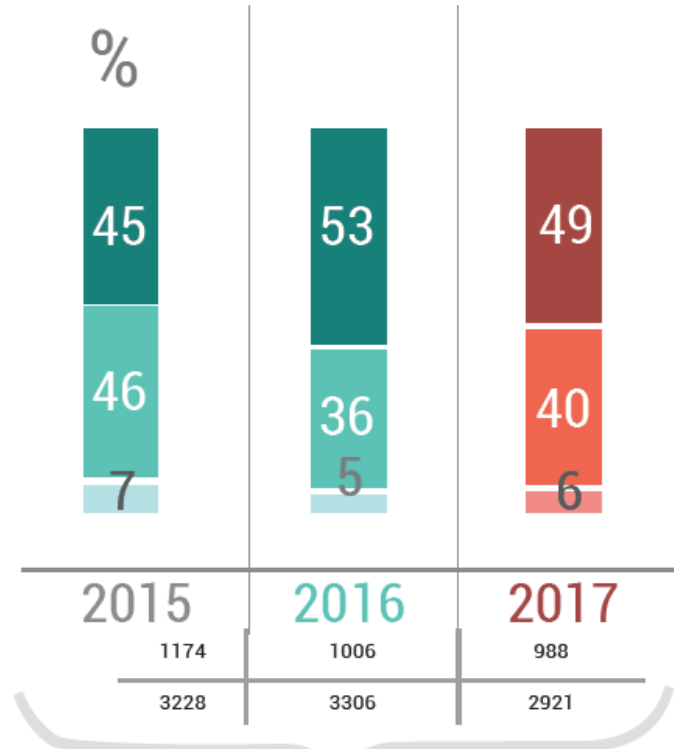
Base: (Real)	1427	1396
Base: (Exp.)	22427	22427

REASON 3

ILLEGALITY KEEPS AFFECTING
THE SECTOR

TOLERANCE TOWARDS ILEGALITY

There are people in the region that gain their living through mining without the government's permission, you think this situation is...

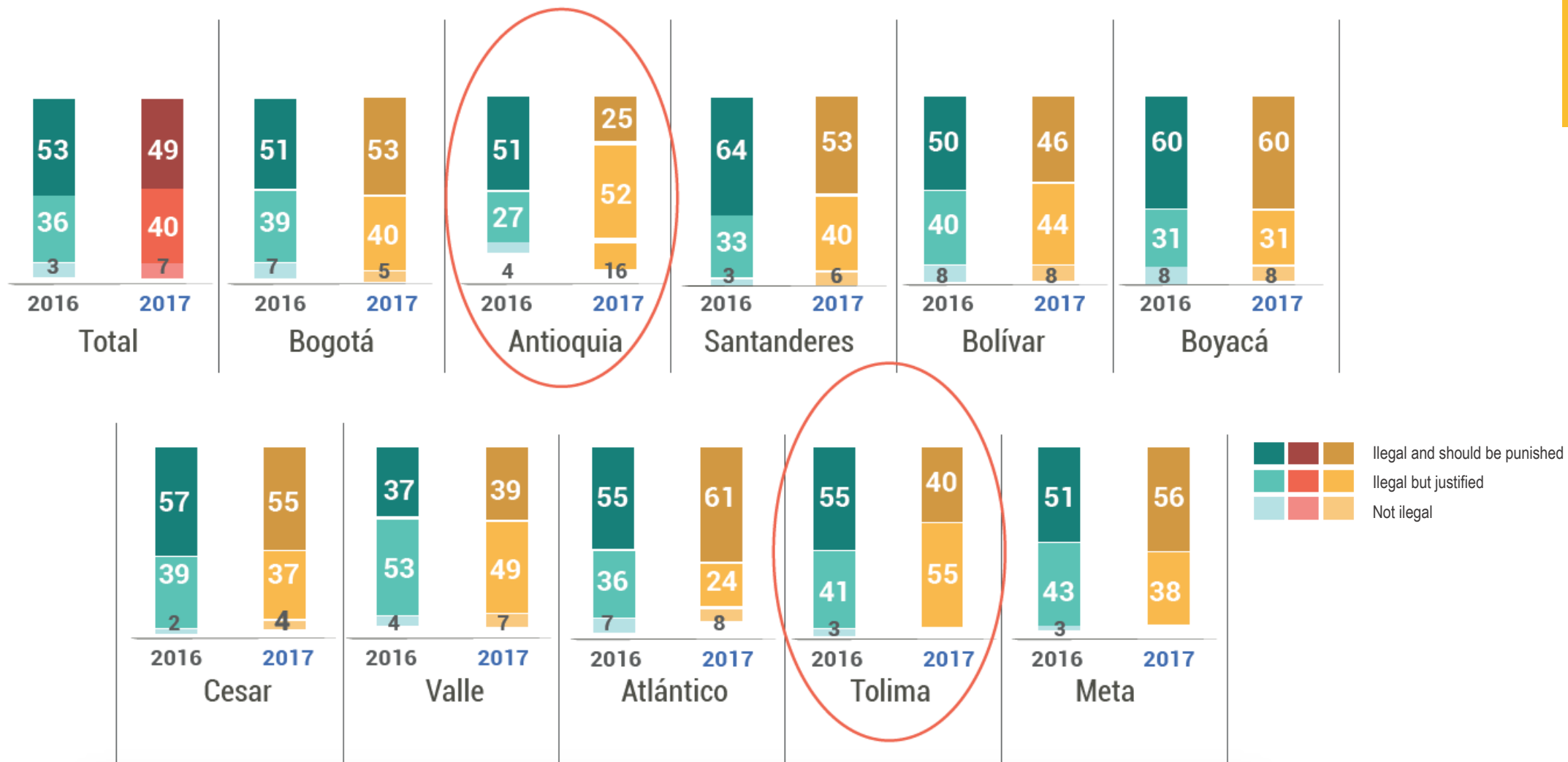


- Illegal and should be punished
- Illegal but justified
- Not illegal

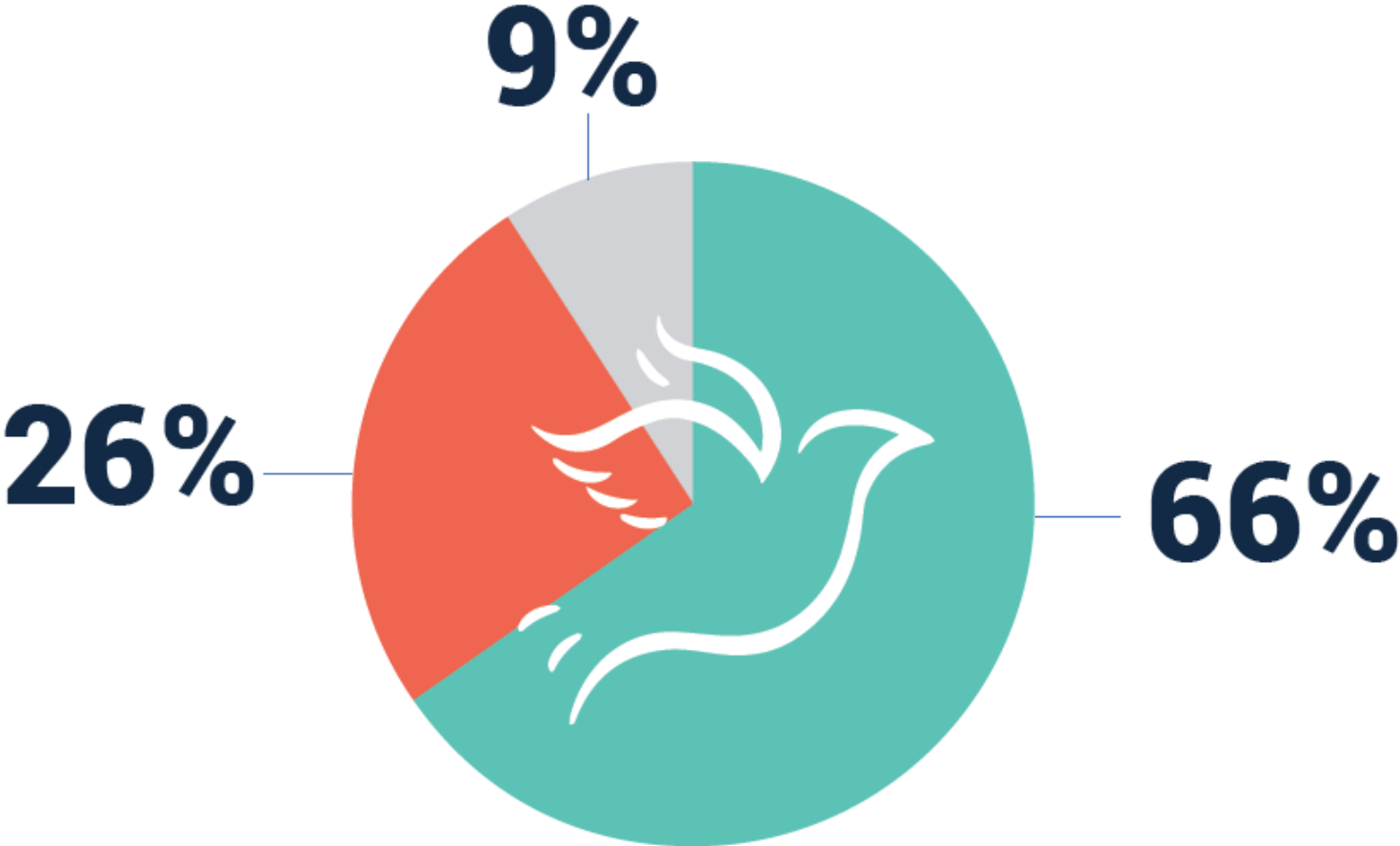


From the following situation, indicate if it seems... (Comparative

There are people in the region that gain their living through mining without the government's permission, you think this situation is...



Is the peace agreement with the FARC a risk or an opportunity for mining?



● Opportunity

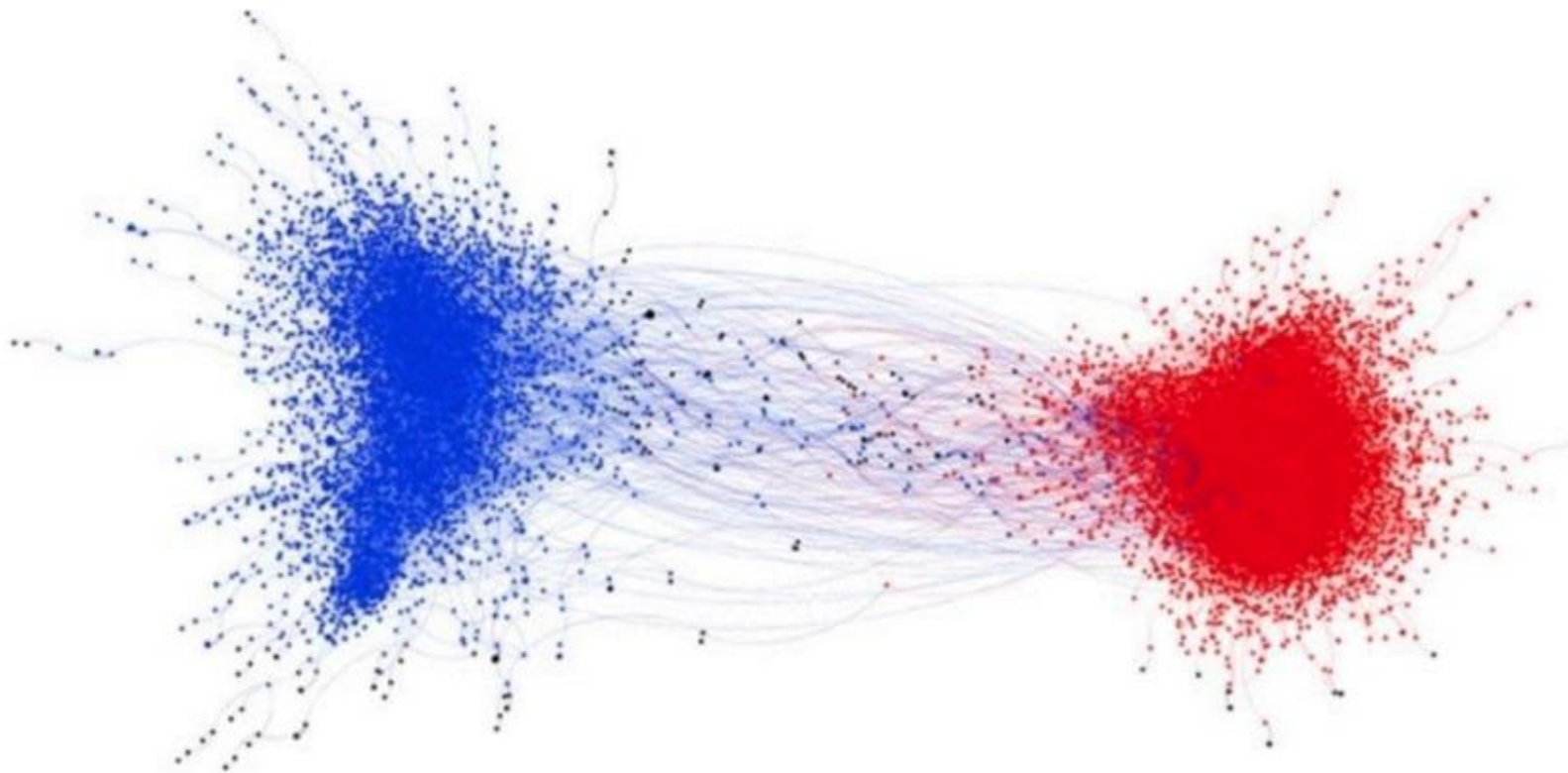
● Risk

● DN/DA

Base 2017: 266

WHICH ARE THE
PENDING
CONVERSATIONS?

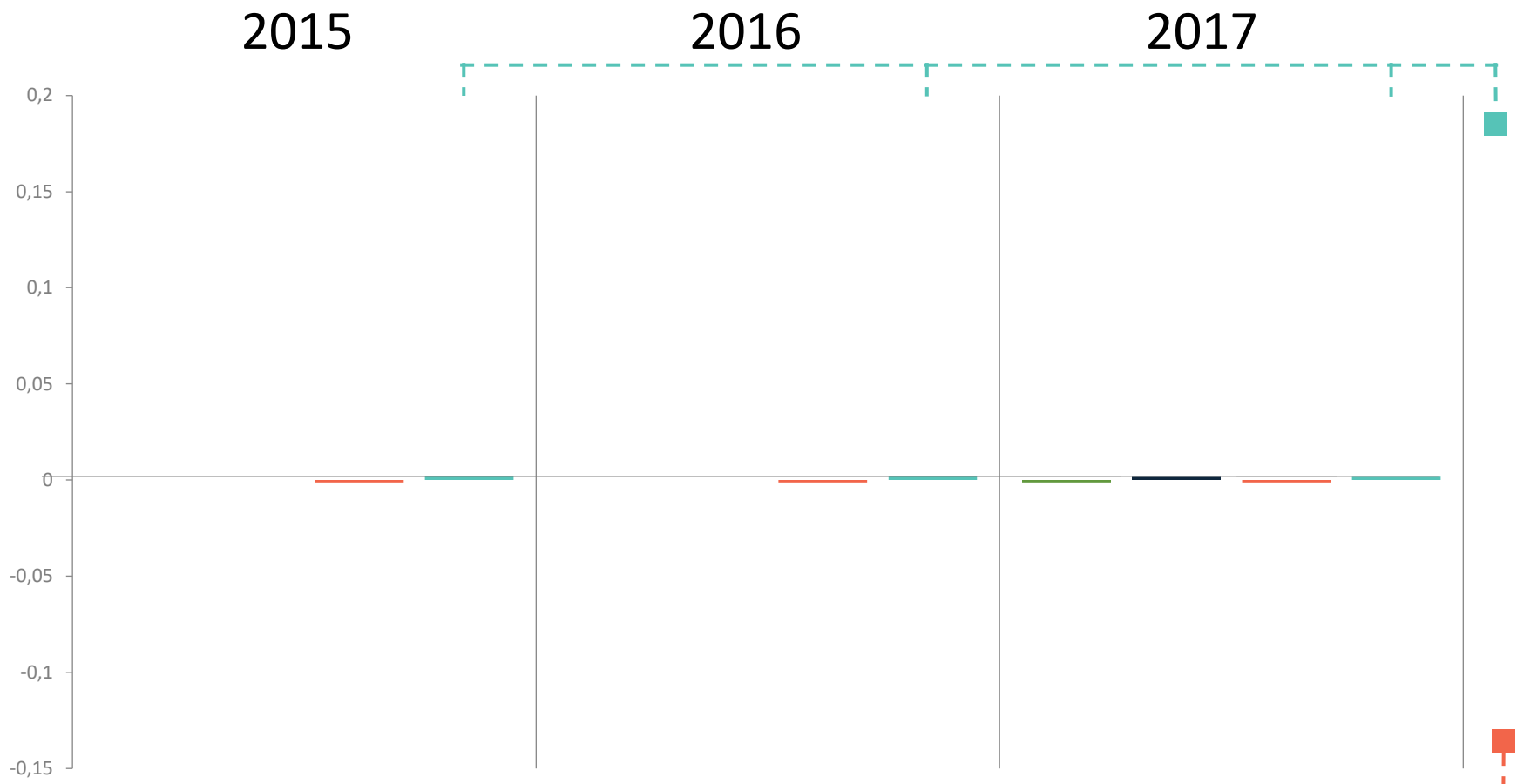
CONVERSATIONS TODAY



Network graph of moral contagion shaded by political ideology. The graph represents a depiction of messages containing moral and emotional language, and their retweet activity across all political topics (gun control, same-sex marriage, climate change). Nodes represent a user who sent a message, and edges (lines) represent a user retweeting another user. The two large communities were shaded based on the mean ideology of each respective community (blue represents a liberal mean, red represents a conservative mean).

Probability to have a good image of the sector according to the source from which a person gets information

(PUBLIC OPINION)



■ National Government ■ Mining Companies ■ Television ■ Internet



Where do citizens obtain information about mining?

↑↓ Significant Difference 2017 - 2016

MINING	
2017	2016

NON- MINING	
2017	2016

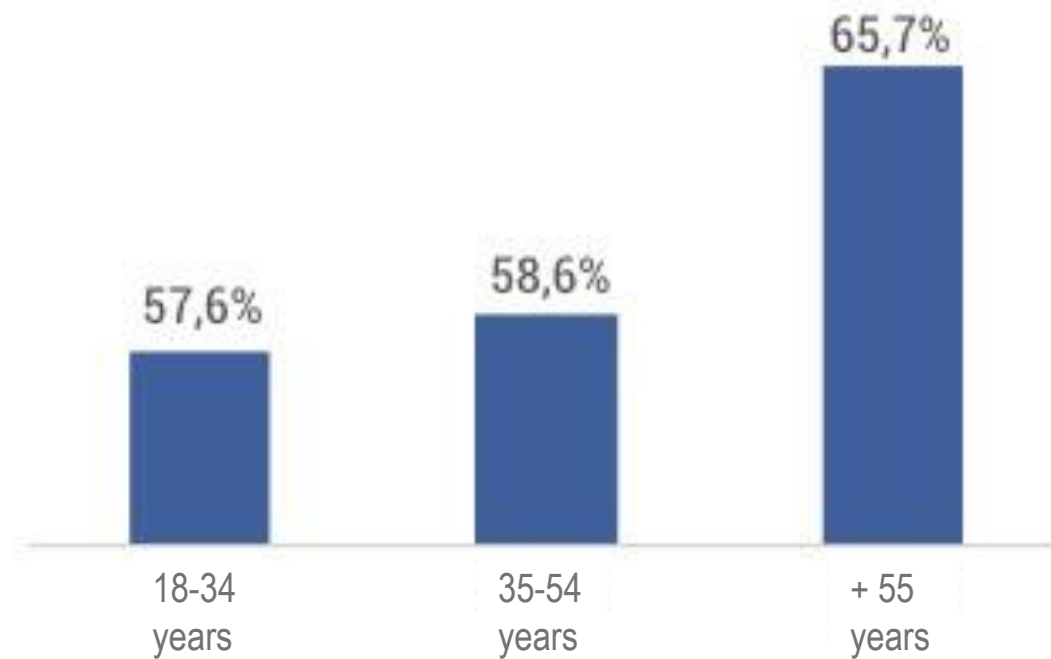
Propensity to consider mining positive for the country (PÚBLIC OPINION)

3. How much do you agree with the following statements ?.... And 4. Do you consider mining positive for the country?

Do you consider mining positive for the **COUNTRY**?

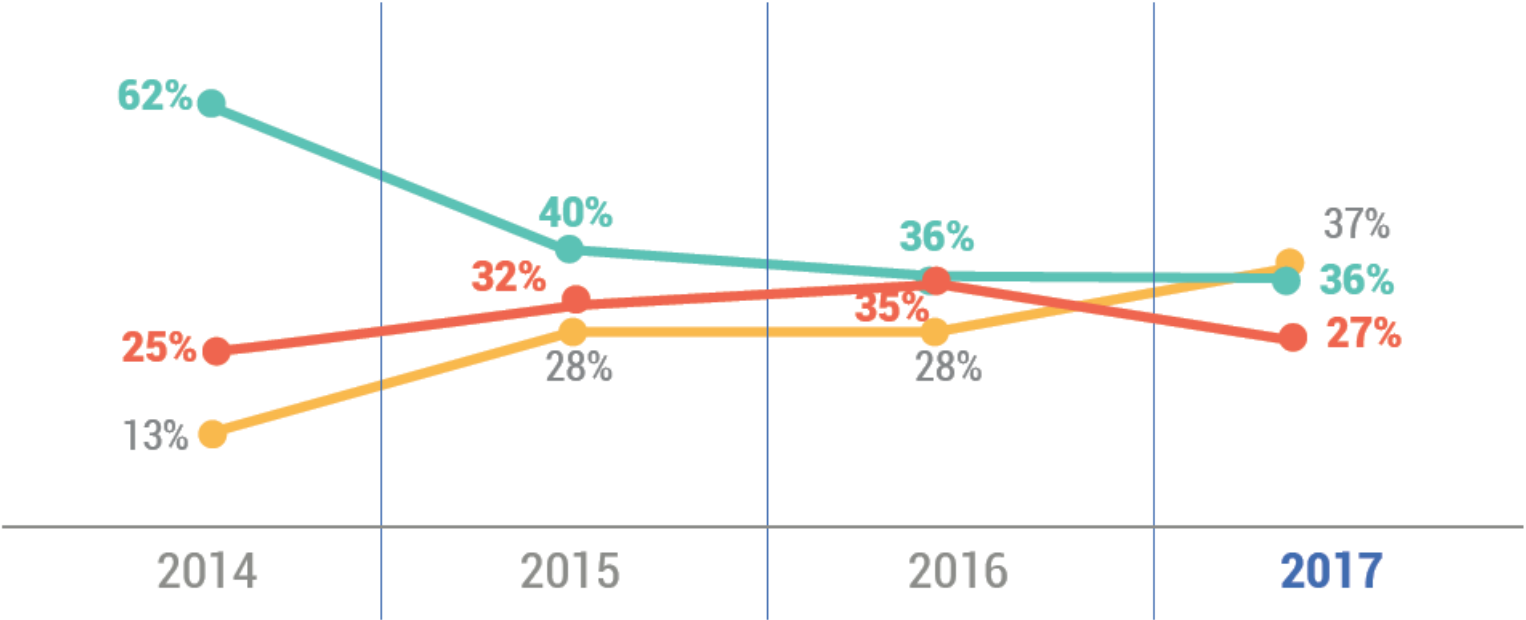
By Age Range

— • % Answered YES • —



IN THIS CONTEXT,
WHAT ARE THE
PROJECTIONS FOR
THE SECTOR?

Projections for the next five years, keeping the actual conditions



● Expand their operations

● Reduce their operations

● Maintain the same

Why do **EXECUTIVES FROM THE SECTOR** consider operations will reduce?



What are the two main reasons for some executives to believe that in the next five years operations will decrease in Colombia? Please indicate two of the following options

THANK YOU!