



# Compliance and Enforcement of EsIA: Requirements, Commitments and Related Permits



Moderator: Tanya Fraizer, IAIA

Facilitator: Cheryl Wasserman, Environmental Governance Institute International,  
IAIA Section Chair, Governance and Implementation Systems

June 24, 2020

# IAIA's Webinar Series

- Effective Project Level **Grievance Mechanisms** in a Changing Landscape: An Interactive Tool
- Understanding **Impact Assessment**
- **Species** Environmental Assessment Guideline
- The IAIA Guide on **Air Quality** Impact Assessments
- **Microplastics** in Estuarine and Coastal Ecosystems
- **Disaster, Conflict** and Impact Assessment: Making This Better Rather than Worse
- *And many more...*

Visit <http://www.iaia.org/webinars.php>

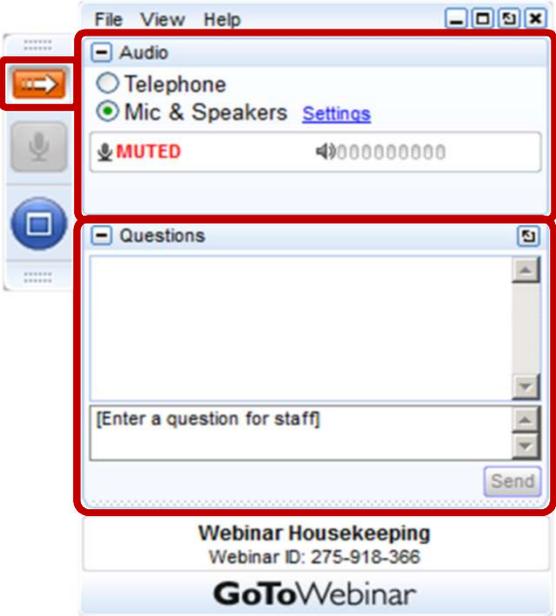
@IAIAnetwork

#iaiawebinar



# ■ Housekeeping

- Recording?** ✓
- Questions?** ✓
- Slides available?** ✓



## IAIA Governance and Implementation Systems Section Goals and Plan of Action

### Themes:

- Reform of EsIA implementation systems for efficiency and effectiveness
- Compliance with and enforcement of EsIA requirements, commitments, permits

### Webinars

- Environmental Permit and Review Reforms: El Salvador, March 2018
- Compliance and Enforcement of EsIA –with the International Network for Environmental Compliance and Enforcement (INECE), June 2020
- Cross hosting with INECE and other networks

### Compilation of best practices

- Working draft on Compliance and Enforcement of EsIA Best Practices

Host Conference Sessions --- Plans for Seville 2020 to 2021



# Relating EsIA process to compliance and enforcement framework

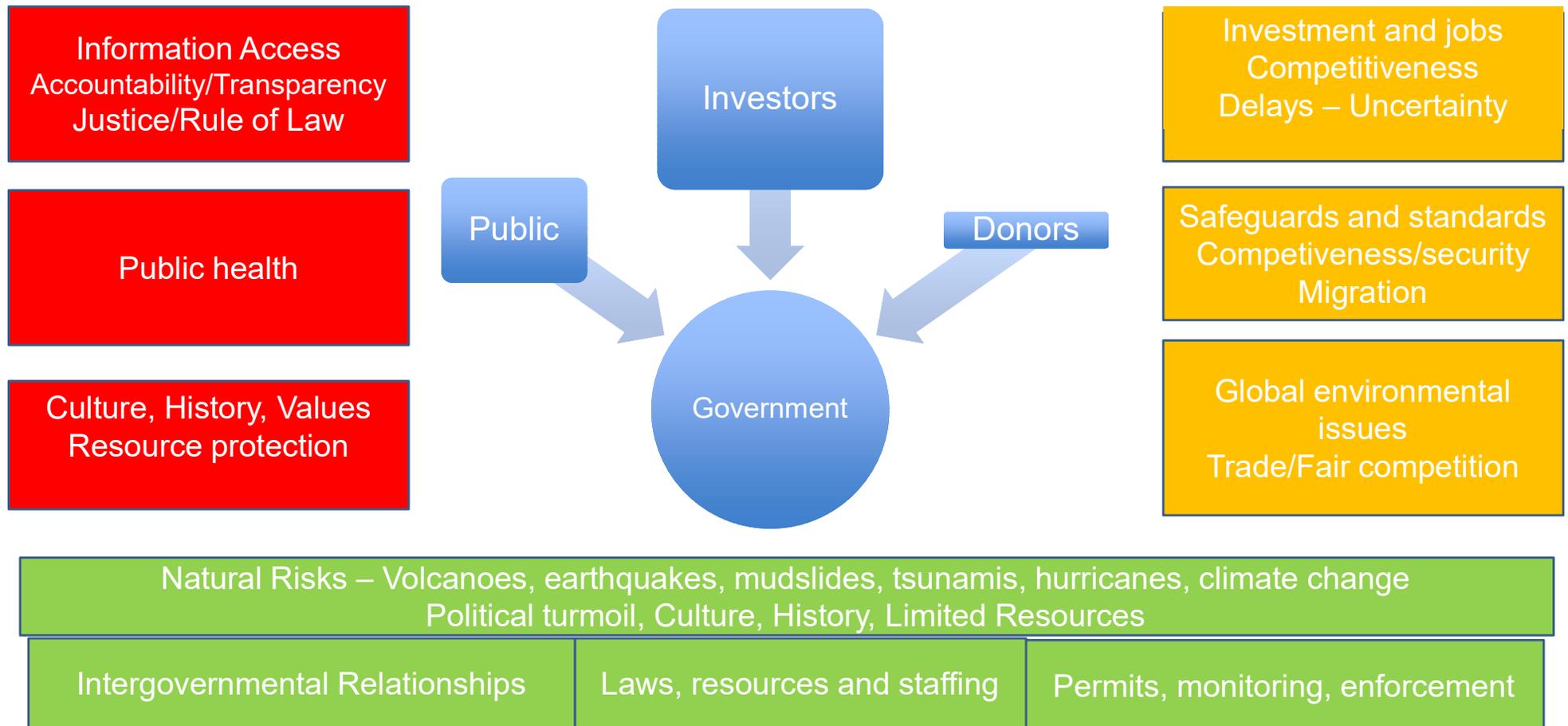
## EsIA Process

- The requirement: Defining levels of environmental review: Categorization  
Permits, licenses, approved Environmental Management Plans for low and moderate impact actions.
- Scoping
- Terms of Reference/Guidelines
- Consultant credentials
- Public Participation
- Decision document
- Legally binding commitments for conditions for approval

## Compliance and Enforcement Framework

- Clear identification of regulated community and priorities
- Clear requirements: who, what, where, why, when
- Compliance Promotion
- Compliance Monitoring: inspection, source self-monitoring/reporting, citizen monitoring, areal monitoring
- Enforcement response/consequences
- Clear roles and relationships
- Accountability and performance measures for results

# Major Forces Challenge EsIA Programs

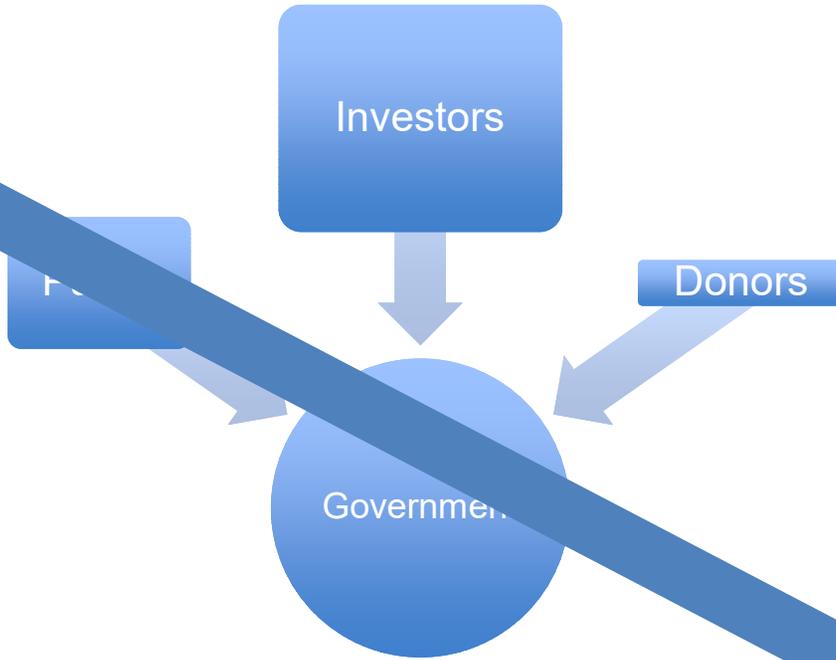


# Major Forces Challenge EsIA Programs

Information Access  
Accountability/Transparency  
Justice/Rule of Law

Public health

Culture, History, Values  
Resource protection



Investment and jobs  
Competitiveness  
Delays/Uncertainty

Safeguarding standards  
Competitiveness/security  
Migration

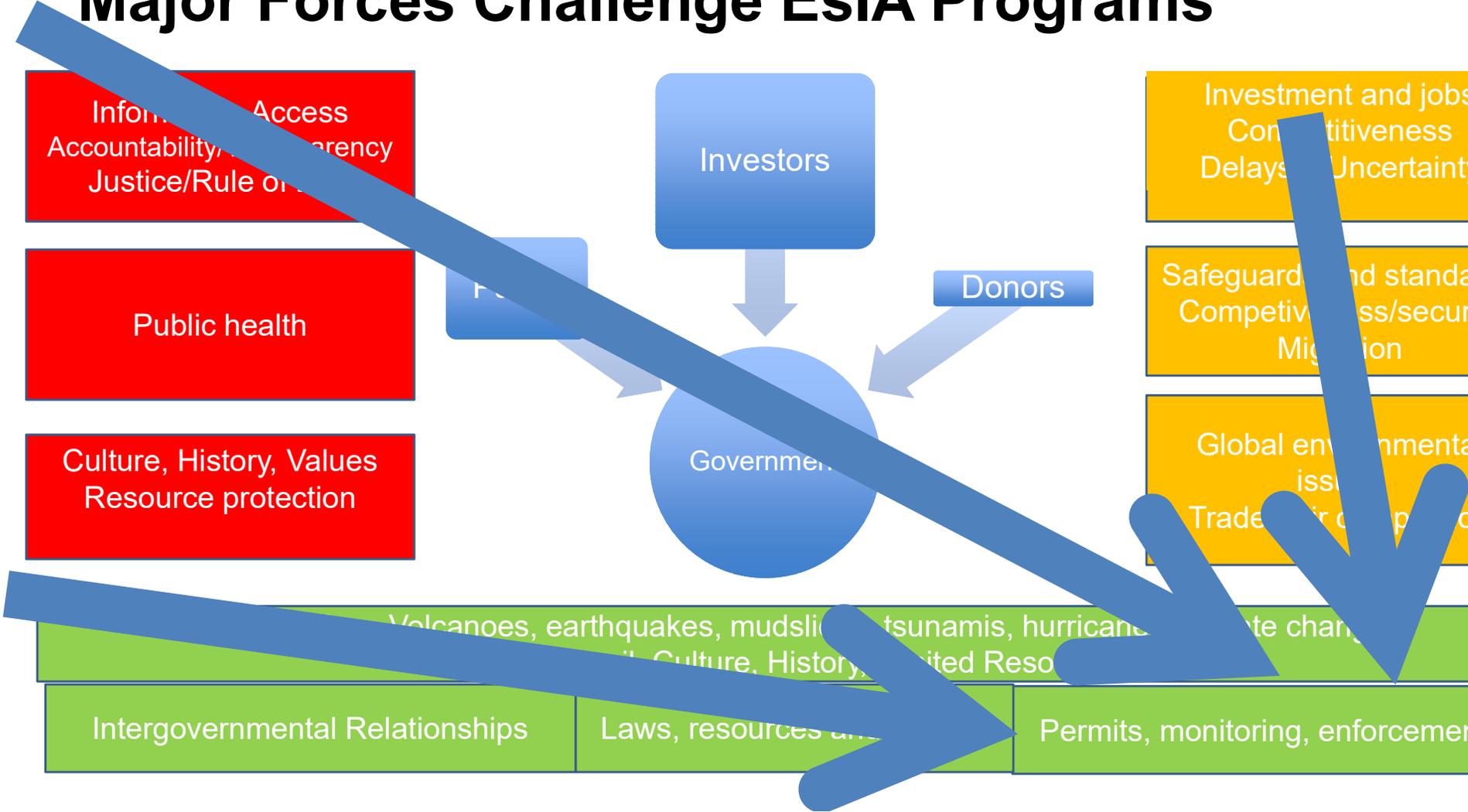
Global environmental  
issues  
Trade/air pollution

Volcanoes, earthquakes, mudslides, tsunamis, hurricanes, climate change  
Cultural, Historical, and Natural Resources

Intergovernmental Relationships

Laws, resources and

Permits, monitoring, enforcement





Compliance, Enforcement, Follow through is perhaps the biggest impediment to achieving positive results from the EsIA process.... and that touches on the EsIA process in its entirety!

June 24, 2020

## IAIA-INECE Webinar on Enforcement of EsIA requirements, commitments, permits



**Sebastian Elgueta**,  
Director Intelligence,  
Superintendence for  
the Environment, Chile



**Phil Seeto**, Director,  
Compliance, Enforcement and  
Follow-Up, National  
Programs, Impact  
Assessment Agency of  
Canada / Government of  
Canada



**Erica van den Honert**  
Director: Infrastructure  
Management at the  
Department of Planning  
Industry and Environment in  
New South Wales, Australia



**Matthew Baird**, Director,  
Asian Research Institute for  
Environmental Law

# OUTLINE

Welcome and Housekeeping	Tanya Frazier	IAIA Staff		(5)
Introductions	Cheryl Wasserman	Chair IAIA Section on Governance and Implementation Systems	USA	(10)
Presenter	Sebastian Elgueta	Director, Intelligence, Superintendencia Ambiental, Chile	Chile	(15)
Panel 1	Phil Seeto	Director, Compliance, Enforcement and Follow-Up, National Programs, Impact Assessment Agency of Canada	Canada	(10)
Panel 2	Erica van den Honert	Director Infrastructure Management, Planning and Assessment, New South Wales	Australia	(10)
Panel 3	Matthew Baird	Director, Asian Research Institute for Environmental Law	South-east Asia	(10)
Discussion	All	Cross Cutting Issues		(20)
Participant Q &A	Cheryl and Tanya	Participant Chat Questions and Comments		(15)
Wrap up/Next steps	Cheryl and Tanya			(5)

# Digital Transformation for Compliance of Environmental Impact Assessment Commitments in Chile

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**Sebastian Elgueta,**  
Director Intelligence, CIO, Superintendencia for  
the Environment.



# ENVIRONMENTAL INTELLIGENCE

ENFORCING EIA REQUIREMENTS



Sebastian Elgueta  
Chief Information Officer  
Superintendencia for the Environment



# Introduction



# Chile

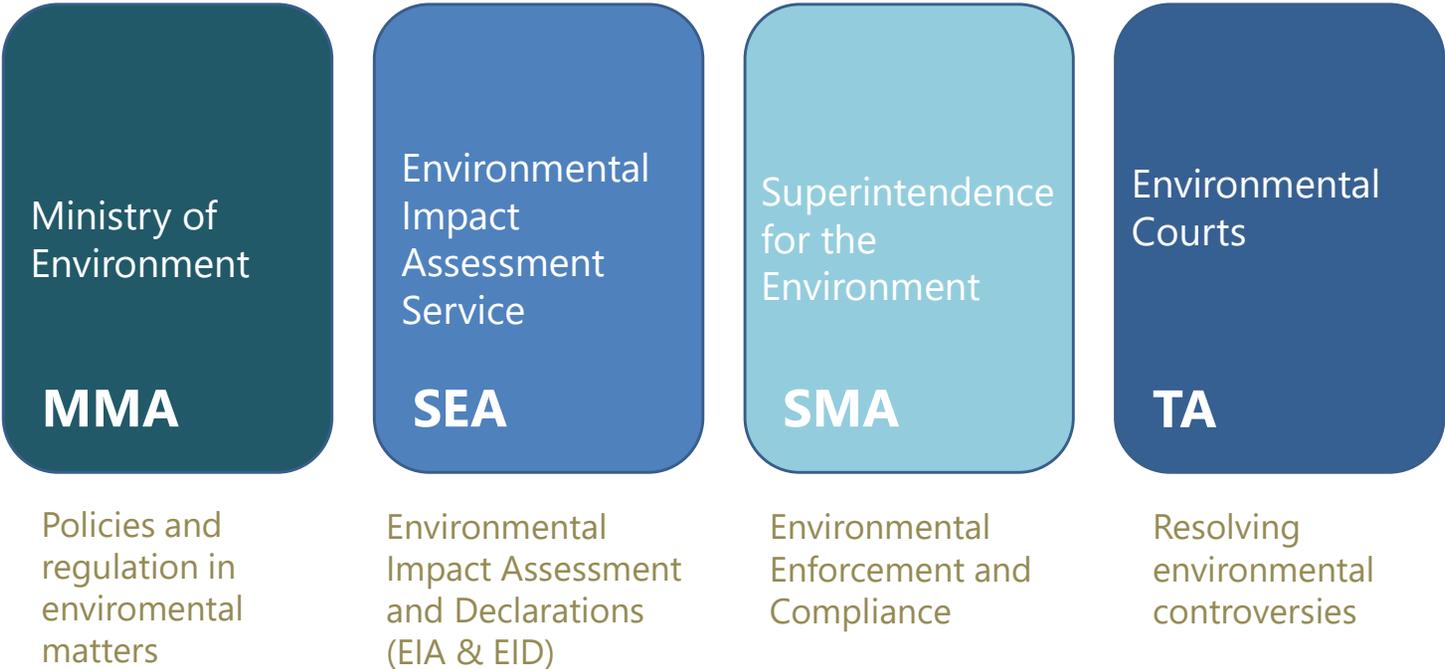


- South American country
- Area: 750.000 km<sup>2</sup>
- Population: 18 millions
- Main exports: copper, fish, fruits, paper pulp and wine



# Environmental Institutional in Chile

Since 2010



# What SMA does

## Superintendence for the Environment

Compliance and Enforcement of environmental regulations

- **Monitoring**
- **Assistance**
- **Public information**
- **Sanctions and Penalties**

Closures

Permit Revocation

Fines up to USD 8 Millions



# Environmental Regulations

## Types



**Environmental permits**  
15.975



**Emission Standards**  
10



**Decontamination Plans**  
17



**Quality Standards**  
13



**Compliance Programs**



**Green Tax Law**



**Extended producer responsibility**

# Facilities

More than 16.000

PLAN DE PREVENCIÓN Y DESCONTAMINACIÓN AMBIENTAL PPDA

**1 UNIDAD FISCALIZABLE**  
• RCA 1  
• N.E. Riles  
• N.E. Termoeléctricas

**2 UNIDAD FISCALIZABLE**  
• Ley REP  
• RCA 2

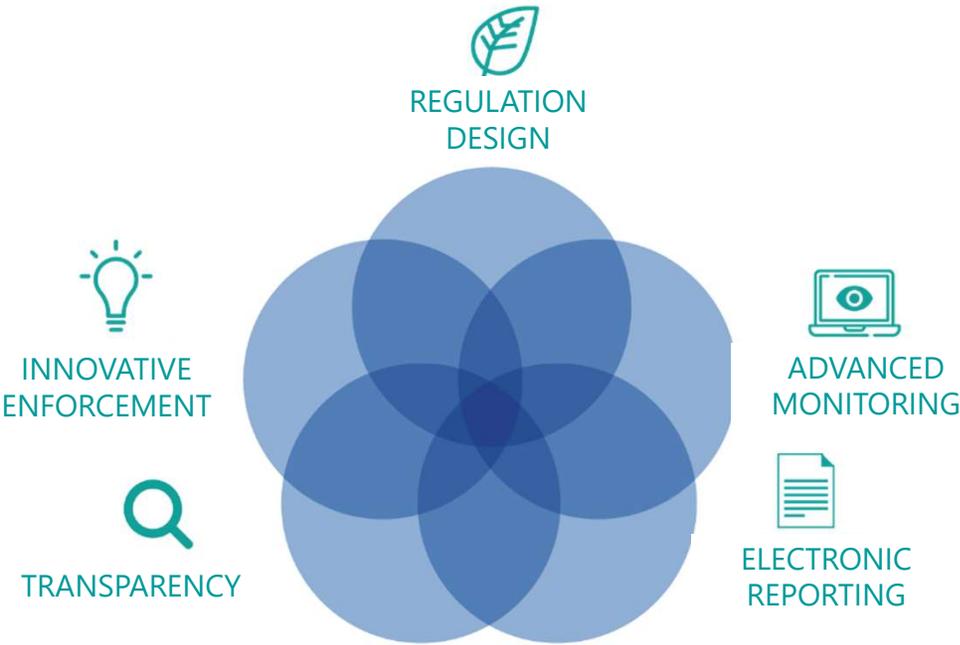
**3 UNIDAD FISCALIZABLE**  
• N.E. Ruidos  
• RCA 3  
• RCA 4



From big Companies to small ones

# Environmental Compliance 2.0

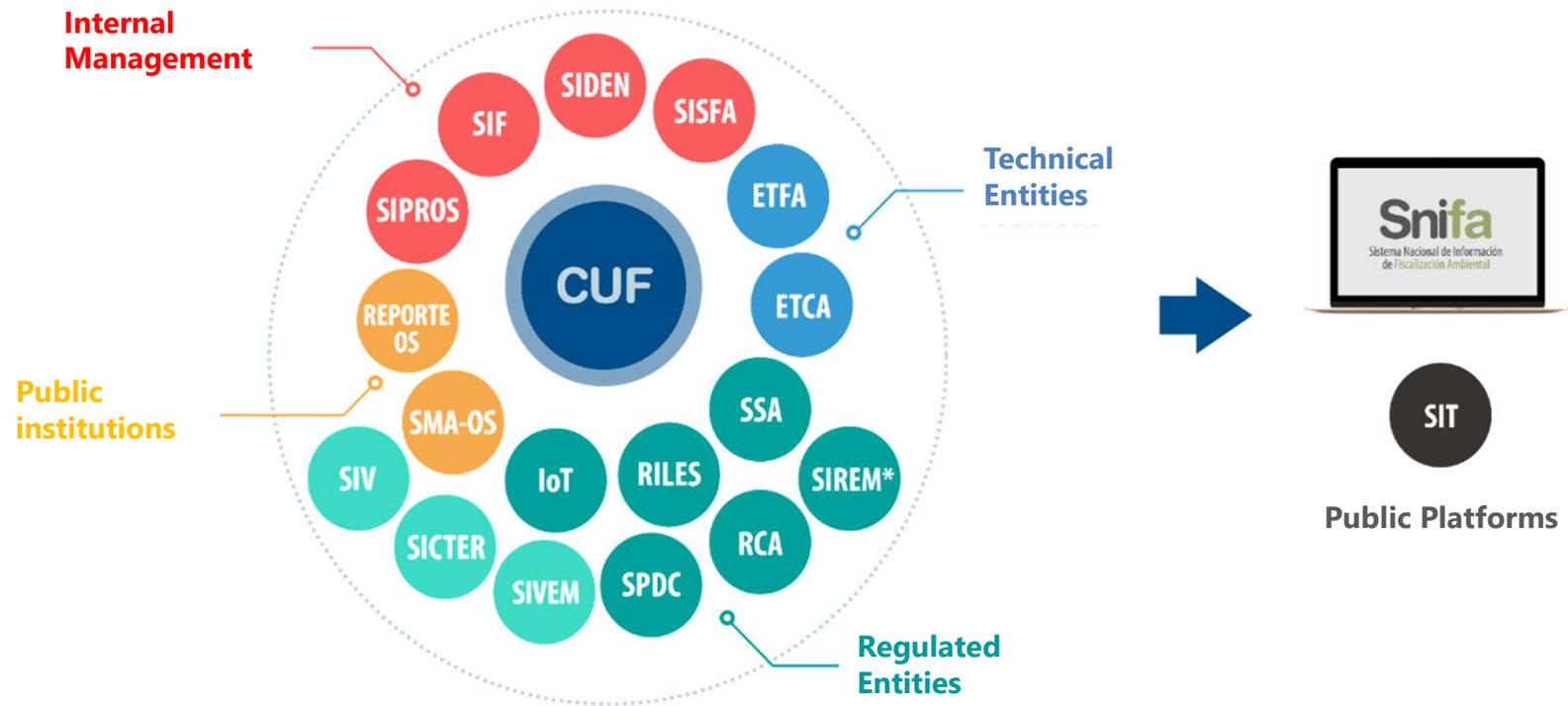
## Digital Transformation Strategy 2015-2019



Inspired by Next Generation Compliance Approach (US EPA)

# Electronic platform

## Integrated systems



CUF (Facility Register Database) is the center

# Better Public Information

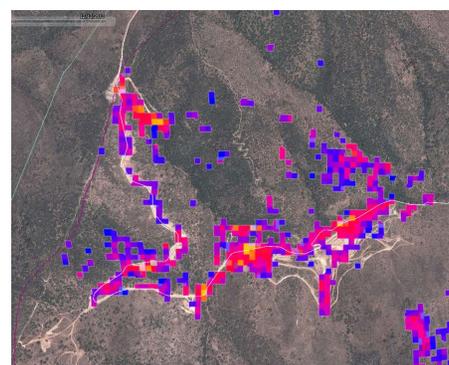
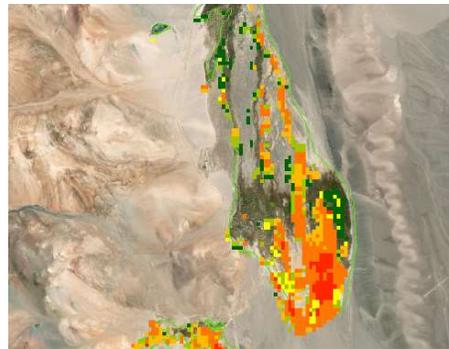
## SNIFA: Environmental Compliance National System



More than 1 million of visits per year

# Advanced Monitoring

# Remote sensing



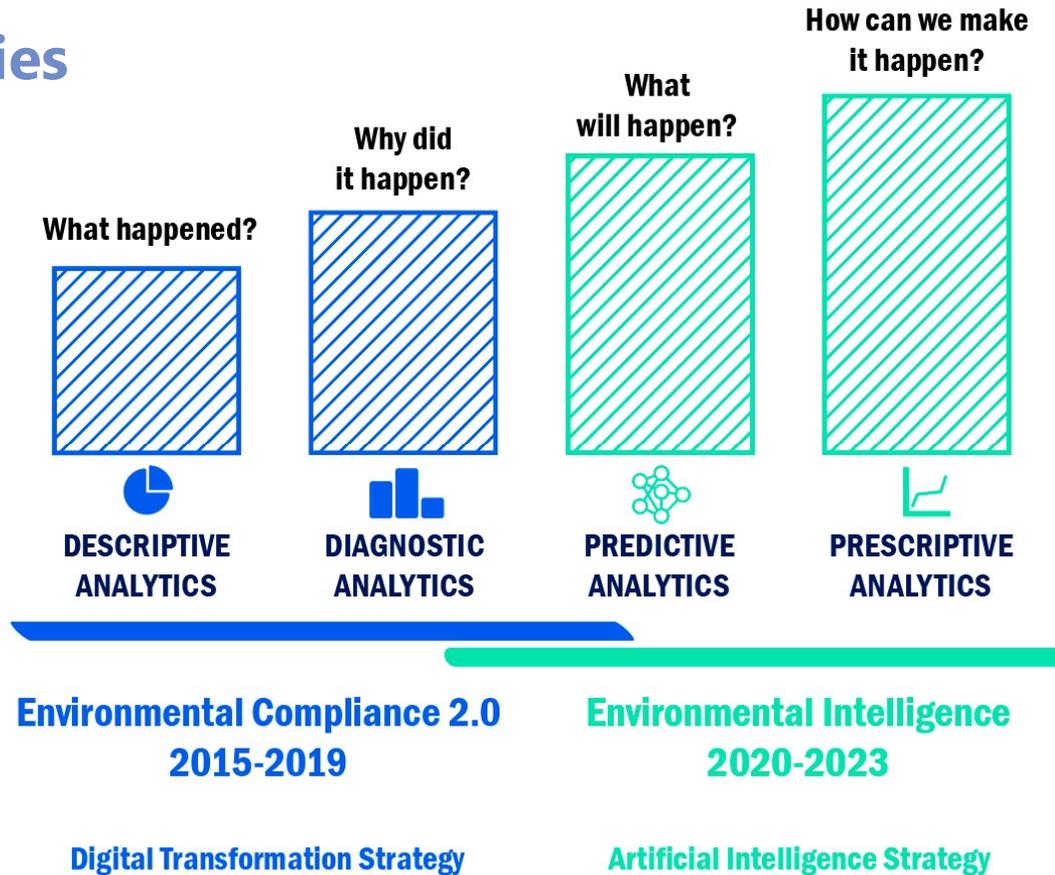
**Real Time Monitoring**  
Internet of Things

**Satellite Imagery**  
Optic and Radar

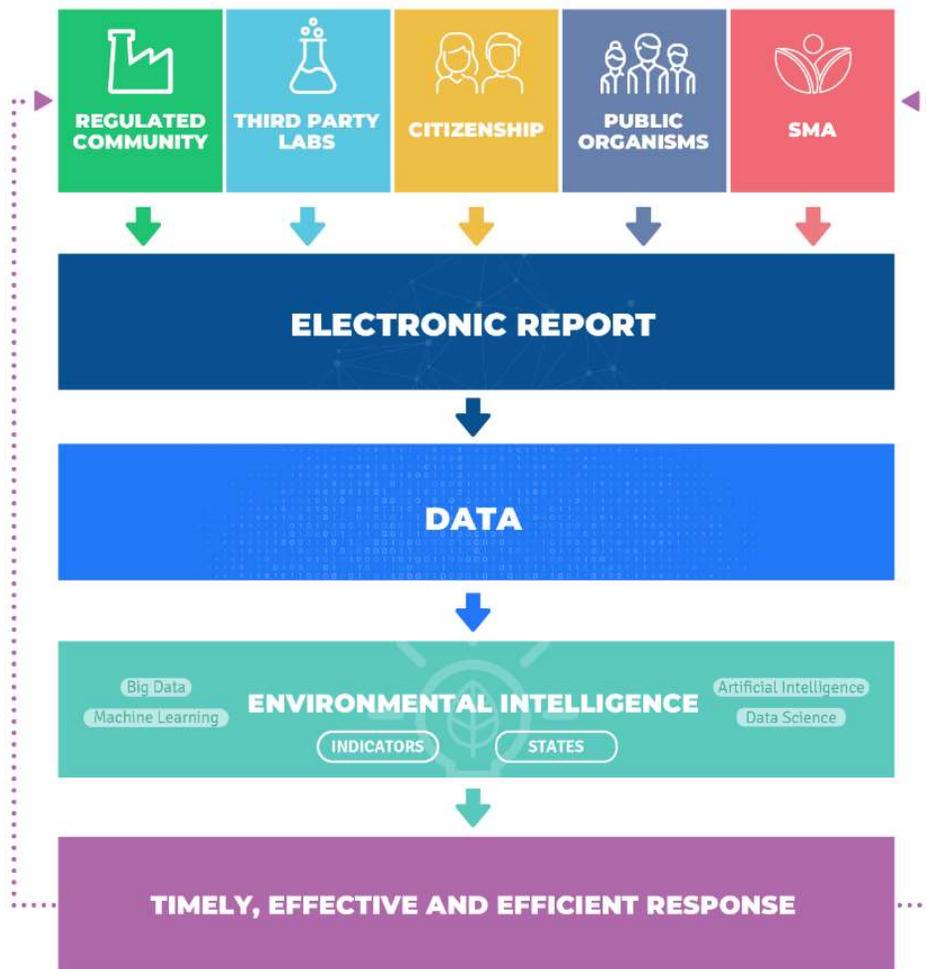
**Drones**  
Thermal camera

# Analytics Evolution

## SMA's strategies



# Environmental Intelligence Strategy 2020-2023

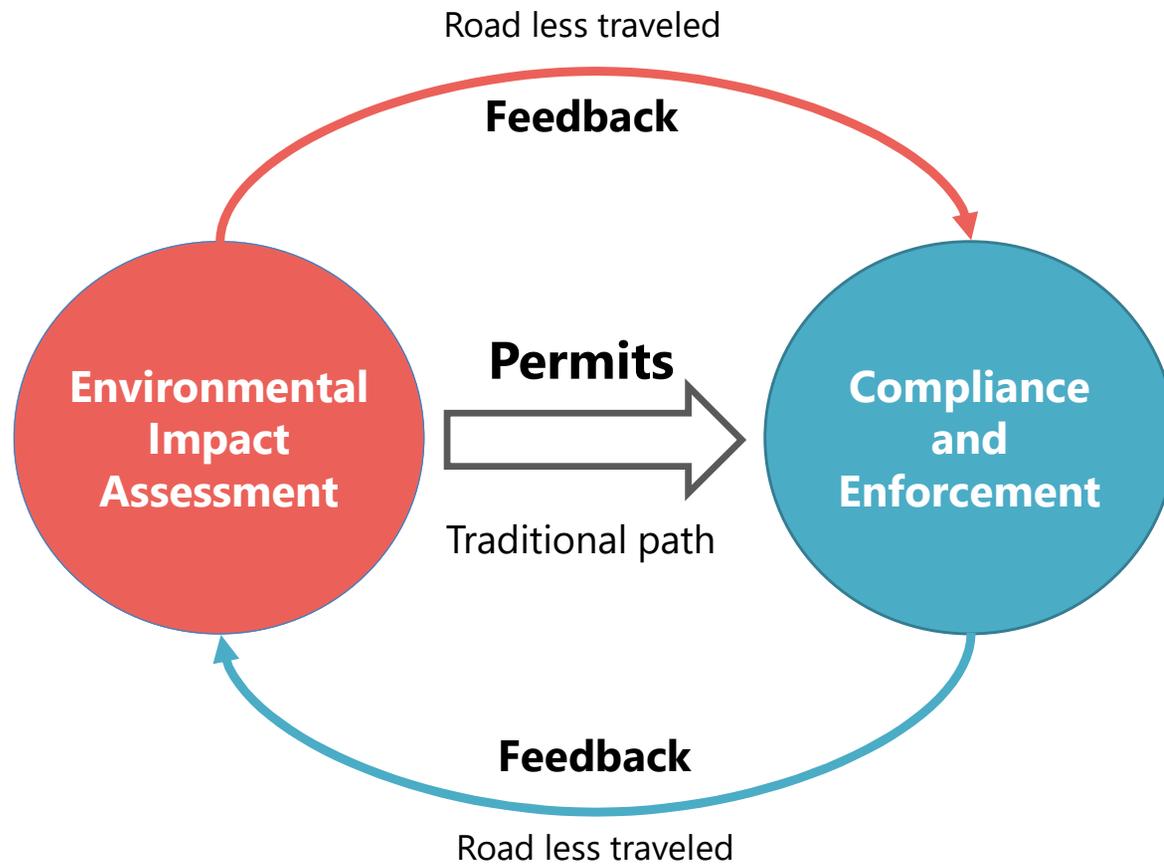




# ENFORCING EIA REQUIREMENTS



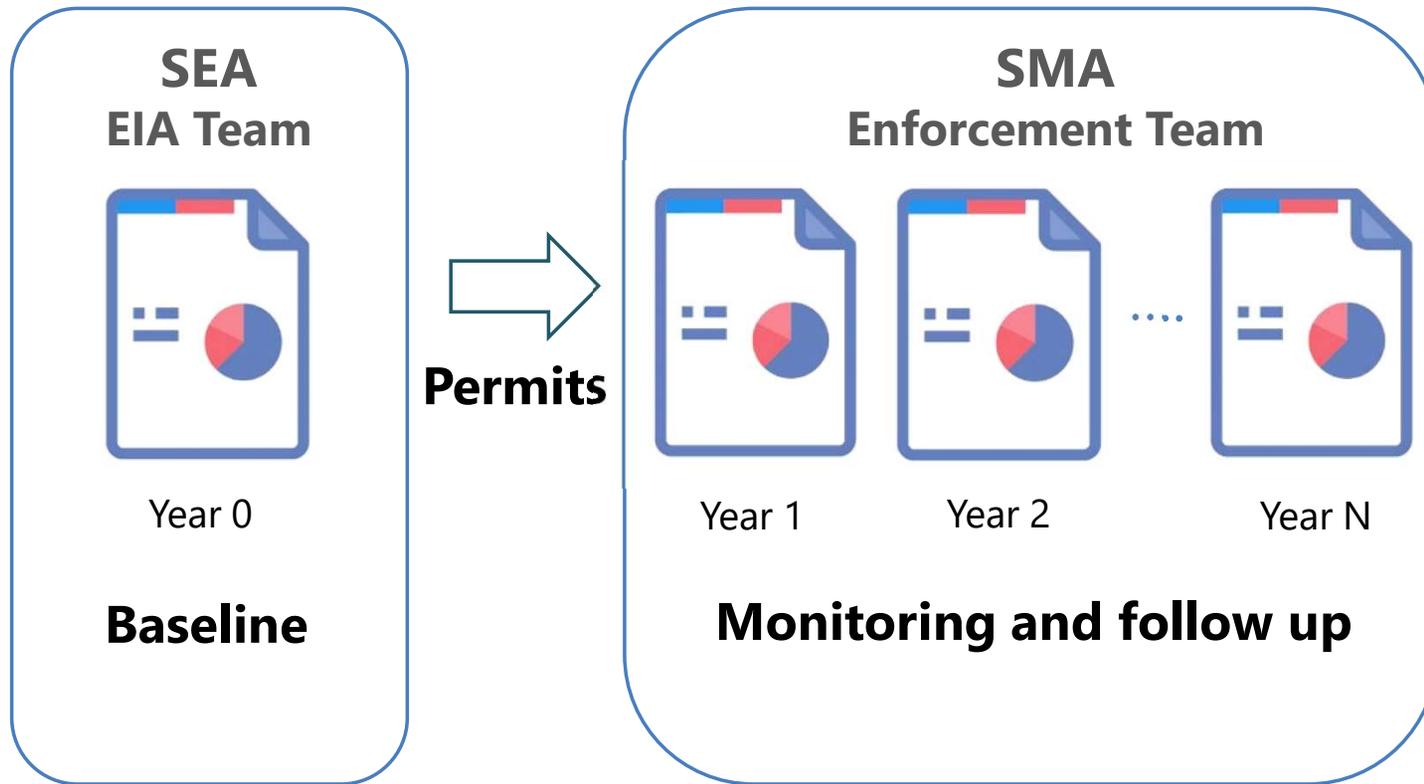
# Virtuous circle



# Difficulties for enforcing EIA Requirements in Chile

- EIA Documents are too large
- EIA Documents with non-standard formats
- Requirements with non-standard formats
- Requirements beyond environmental matters
- Many Facilities with more than 1 permit
- It is not easy to update permits
- Limited staff and budget
- Information silos and lack of Data

# Information Silos

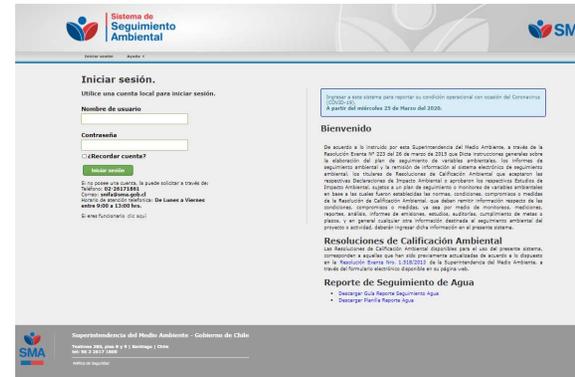


Different platforms, without disaggregated data

# SMA's Current System

## Electronic reporting

- Thousands of PDF reports that include millions of Data
- Only general data is collected
- Architecture not designed for cloud and big data



<https://ssa.sma.gob.cl/>

## A typical report

### Sand Crab Monitoring Study



82.981 Reports received since 2013

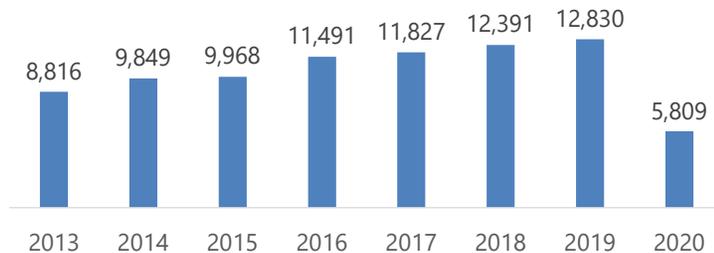


Tabla 7. Concentración de cobre (ppm) presente en tejidos de *E. analogus* en las estaciones intermareales del PVA de Codelco Ventanas en bahía Quintero.

Estación	Cu (ppm)
Norte	235.0
Centro	280.0
Sur	399.7
Promedio	274.8
Límite de detección	0.50
Presencia (%)	99.58
Exactitud (%)	99.68

4.2.2 Abundancia de *E. analogus*

Un total de 4900 individuos·m<sup>-2</sup> de *E. analogus* fueron registrados en el área de estudio. Esta especie fue registrada en los tres transectos muestreados. En detalle, fueron registrados 1600 individuos/m<sup>2</sup> en el transecto norte (TN), 1000 individuos/m<sup>2</sup> en el transecto centro (TC) y 2300 individuos/m<sup>2</sup> en el transecto sur (TS). Por otra parte, la biomasa total de *E. analogus* fue 2518.5 g/m<sup>2</sup> (Tabla 8).

Tabla 8. Abundancia (número de individuos/m<sup>2</sup>) y biomasa (gramos de peso húmedo/m<sup>2</sup>) de *E. analogus* presente en las estaciones intermareales del PVA de Codelco Ventanas en bahía Quintero.

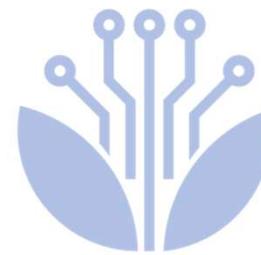
Transecto	Abundancia		Biomasa
	Individuos	g/m <sup>2</sup>	
TN-R1	0	0	
TN-R2	100	75.1	
TN-R3	1000	788.1	
TN-R4	500	212.4	
TN-R5	200	202.0	
TC-R1	0	0	
TC-R2	200	133.7	
TC-R3	200	184.1	
TC-R4	300	80.3	
TC-R5	300	64.6	
TS-R1	300	73.8	
TS-R2	0	0	
TS-R3	1100	383.3	
TS-R4	900	321	
TS-R5	0	0	
Total	4900	2518.5	





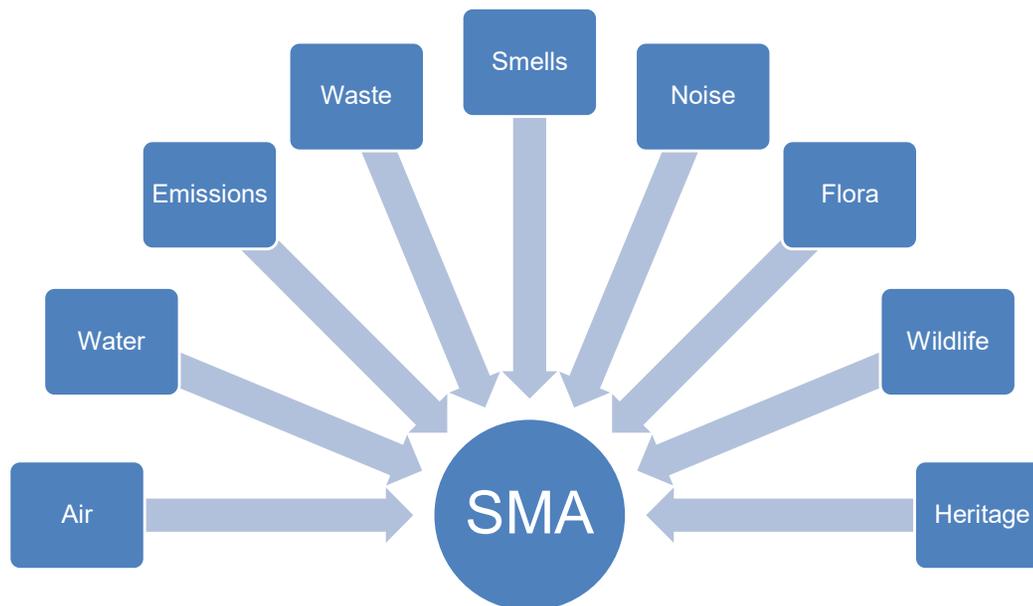
**Are EIA requirements and commitments being met?**  
**Does compliance ensure environmental protection?**

**We need Data**  
**We need Analytics**



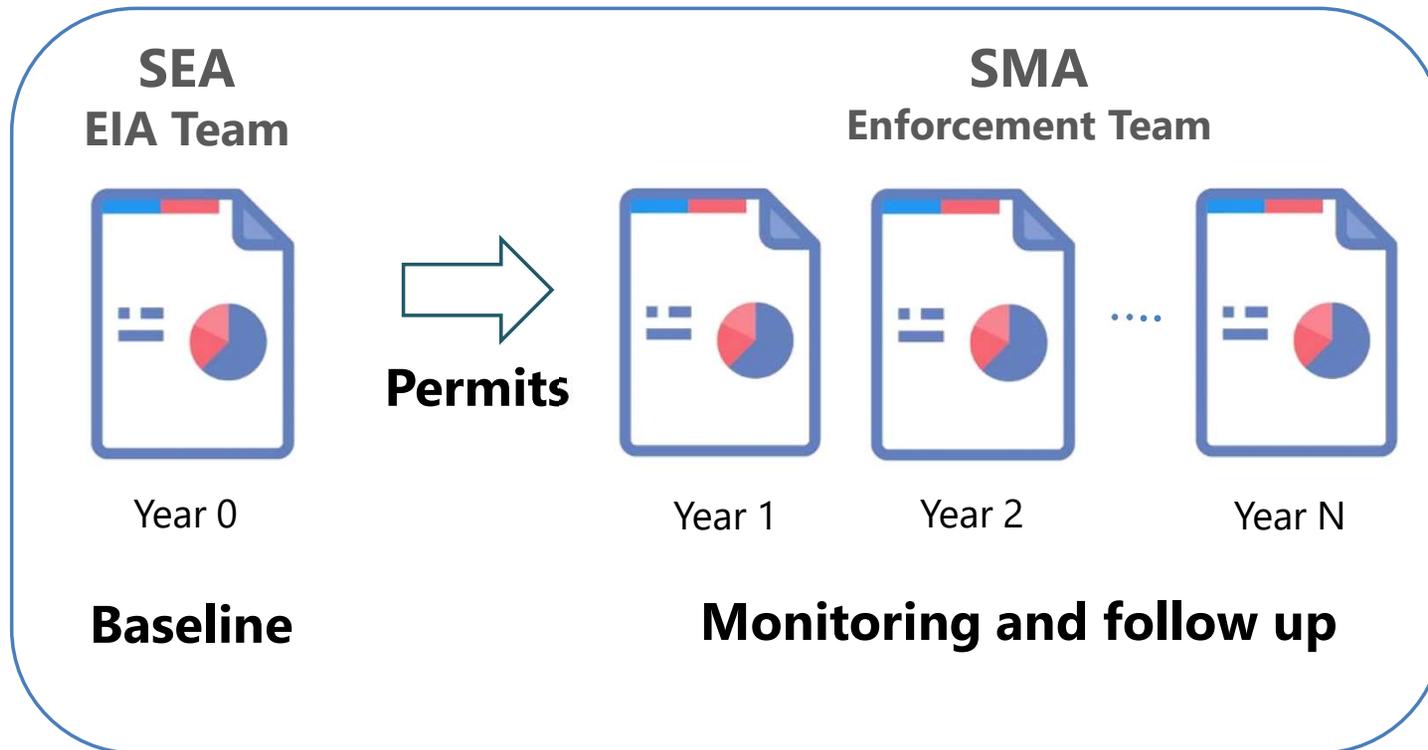
# New Information System

From PDF reports to Data reporting



**Environmental baseline available for anyone**  
Science, Public Institutions, Investors, Citizenship

# New Information System



Unique Platform with disaggregated data

# New Information System

## Current Project 2020-2021

- Register of requirements and commitments
- Standard report formats for each component
- Automated compliance verification
- Environmental indicators and predictive models
- Portal for Regulated Entities
- Portal for Citizenship, Open Data and APIs
- Reporting by APIs M2M

How are we developing this?

Agile Development (Minimum Viable Product)

Architecture oriented to Cloud and Big Data

### Some of Data to be collected

Component

Coordinates

Dates

Parameters

Values

Units

Thresholds

Methodologies

Third Parties

Etc.

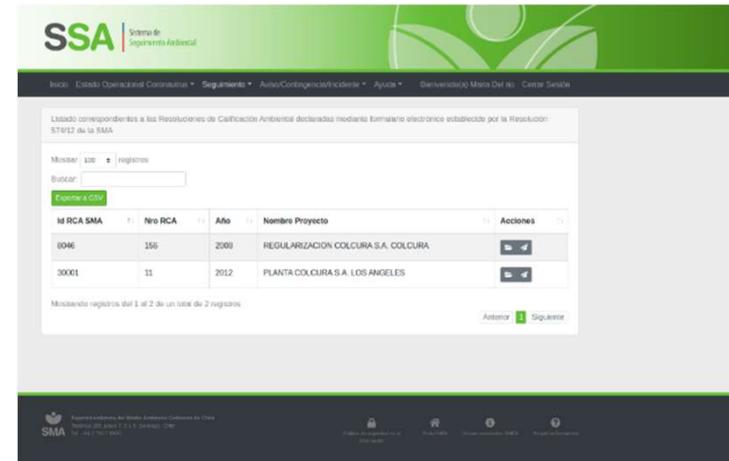
# New Information System

## Current Project 2020-2021



May 2020: Report format published for Water component.

Coming soon formats for Biodiversity and so on.

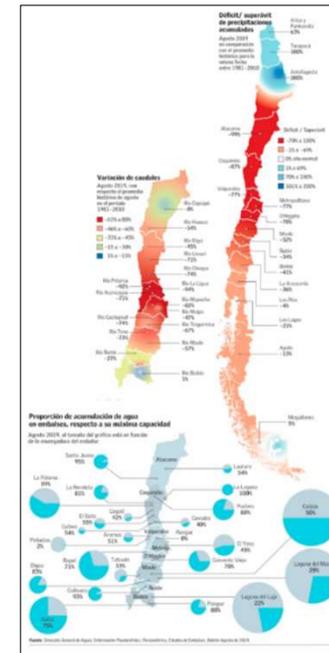
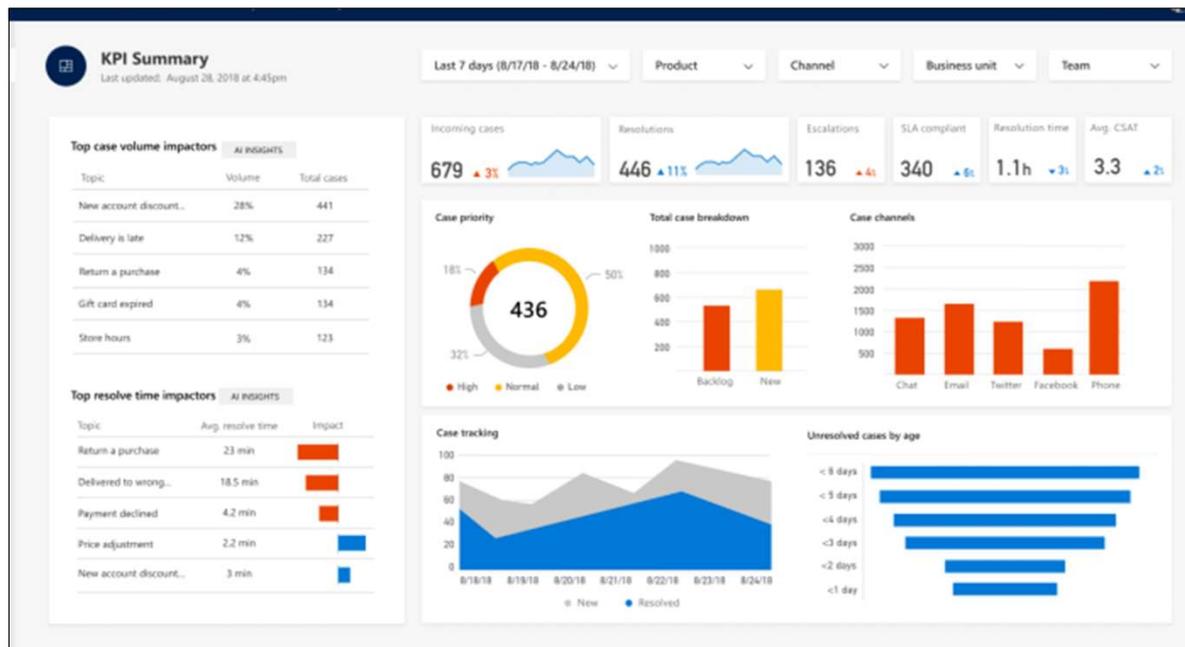


Aug 2020: Launch of new system. First version

Permanent deployment of new functionalities

# New Information System

## 2021: Portals and APIs

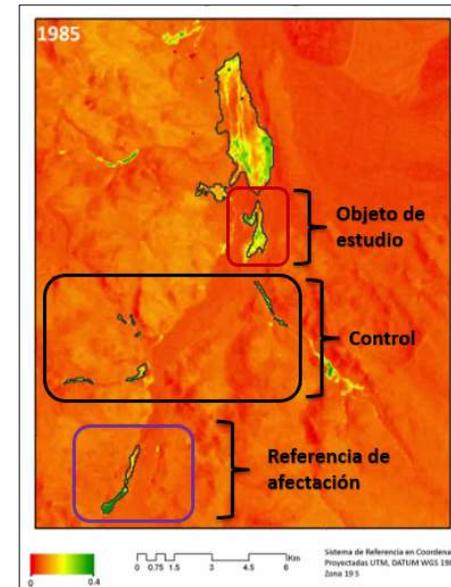


## Data, Indicators and Predictions

# Other applications for enforcing EIA commitments

## Impacts on Highland Wetlands

- Massive monitoring of 5.622 wetlands
- Automated break detection of Vegetation Index (NDVI and SAVI) using optical satellite images
- Time series of 30 years



Emblematic Case:

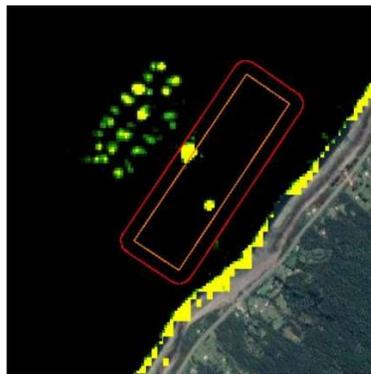
### **Maricunga Wetland (RAMSAR site)**

Affectation produced by groundwater pumps for gold mining. Sanctions: closure of pumps and monetary penalties

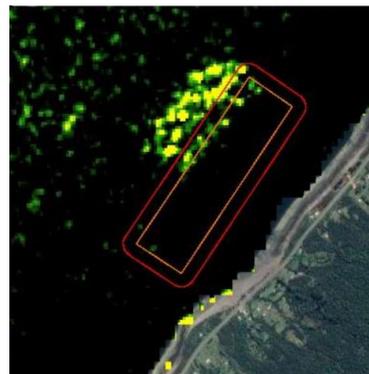
# Other applications for enforcing EIA commitments

## Fish Farming Massive monitoring

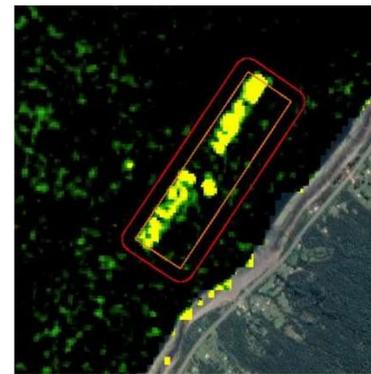
- 1.436 Fish Farms monitored
- Automated algorithms to check permitted location using radar satellite images (SAR)
- Cloud computing
- Dissuasive effects



2014



2016



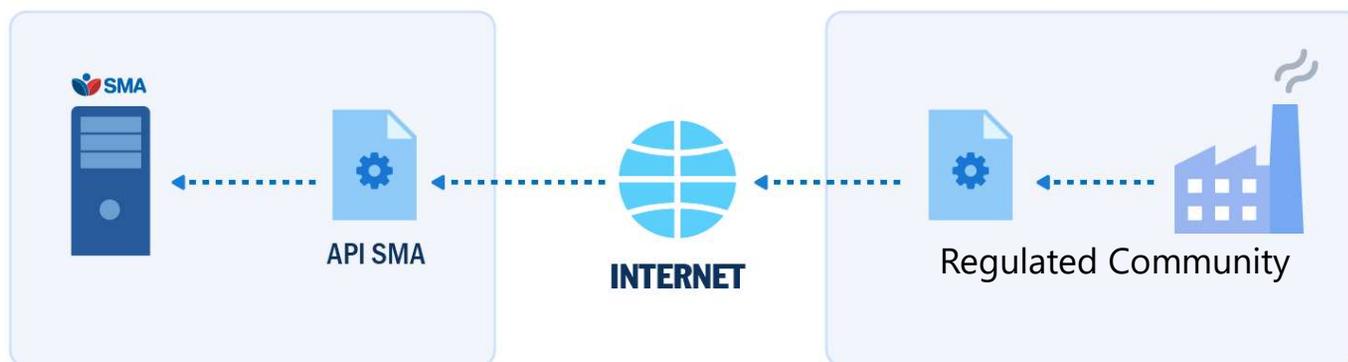
2019

## Other applications for enforcing EIA commitments

### Real time monitoring

**Many permits require continuous monitoring..... Let's connect!!**

- CEMS – Continuous Emission Monitoring Systems
- Air Quality Monitoring Stations
- Water Quality Monitoring Stations
- Operational variables



**We will have thousands of facilities connected on 2021**



**SMA**

Superintendencia  
del Medio Ambiente  
Gobierno de Chile

# IAAC, Canada

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**Phil Seeto**

**Director, Compliance, Enforcement and Follow-Up, National Programs, Impact Assessment Agency of Canada / Government of Canada**

# Impact Assessment in Canada

COMPLIANCE PROMOTION AND ENFORCEMENT UNDER THE *IMPACT ASSESSMENT ACT, CANADA*  
IAIA & INECE WEBINAR – JUNE 24, 2020



Impact Assessment  
Agency of Canada

Agence d'évaluation  
d'impact du Canada

Canada

# Post-Decision Phase



# Changes

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1. Non-enforceability for projects where Life-Cycle Regulators adopt conditions into their permits, certificates, etc.
  - Removes duplication of processes
  - Allows for single point of contact for proponents following assessment
2. Stronger tools in cases of non-compliance
  - Increased fines – up to \$8,000,000
  - Immunity (whistleblower protection)
  - Publication powers
3. Creation of the Follow-Up Team
  - Verify effectiveness of mitigation measures and impact predictions
  - Establish monitoring committees that allow for increased opportunities for participation
  - Encourages and facilitates continuous improvements to assessments

# Goals

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- These changes will:
  - Result in building productive, open relationships with proponents to encourage compliance and enable a timely return to compliance
  - Focus on compliance promotion and education, as a primary focus of the enforcement program
  - Ensures that enforcement actions are carried out in a fair and transparent manner
  - Create accountability in the impact assessment process

# EIA to enforcement and back again New South Wales, Australia

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**Erica van den Honert**

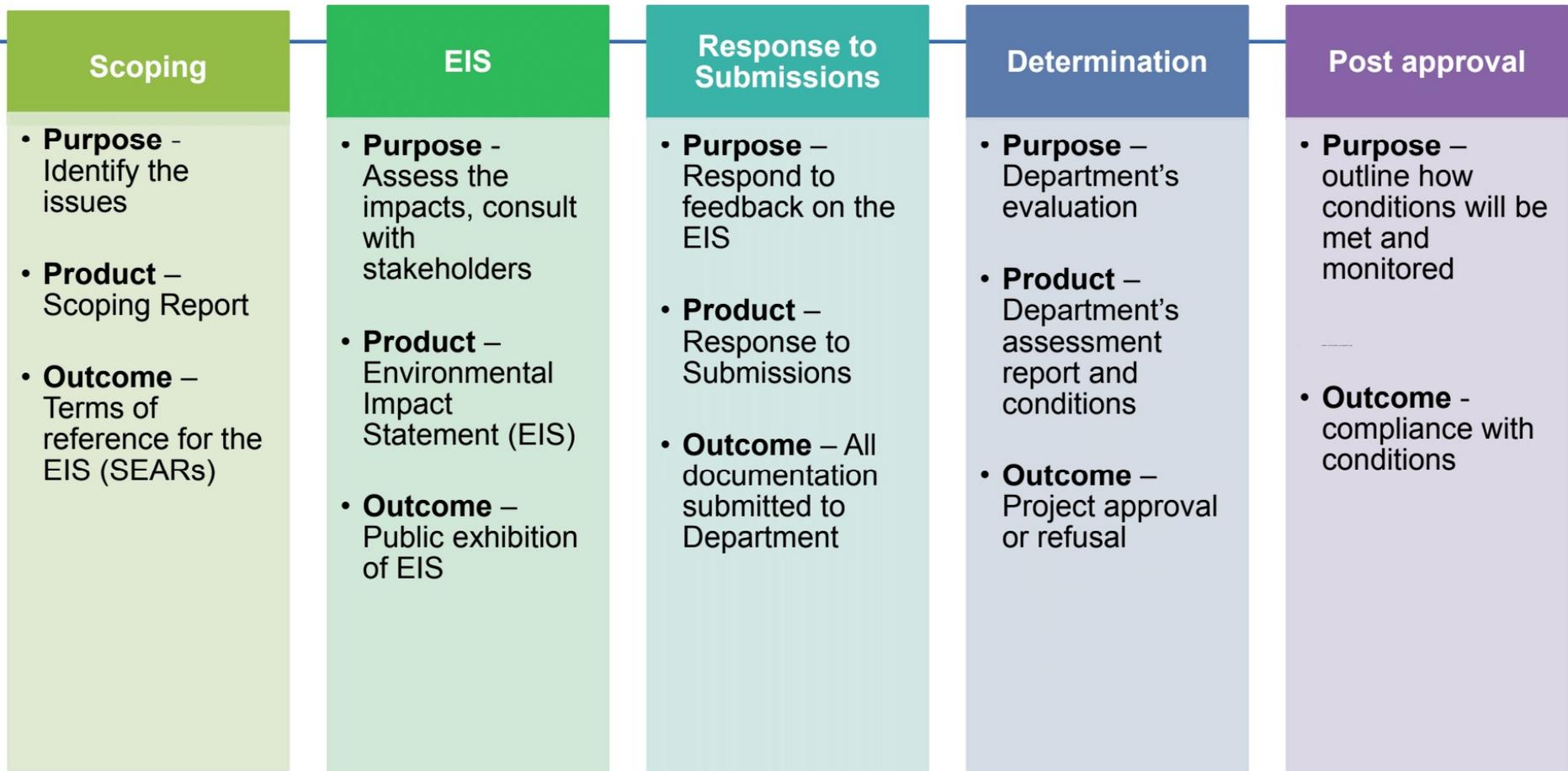
Director: Infrastructure  
Management at the Department  
of Planning Industry and  
Environment in New South  
Wales, Australia

# Framework governing EIA and post approval

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- The Department of Planning, Industry and Environment (DPIE) is responsible for EIA of projects of State significance
- *Environmental Planning and Assessment Act (1979) (EP&A Act)*
- Projects approved with conditions
- Compliance with conditions is enforced by DPIE's Compliance team
- NSW EPA responsible for enforcing compliance with *Protection of the Environment Operations Act 1997 (POEO Act)* (e.g. air quality, contaminated land, waste, noise, water)

# The EIA process



# Some features of post approval



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- Conditions of approval
- Environment Protection Licences for certain projects
  
- Compliance reporting – self reporting against conditions and EIA commitments
- Independent auditing – external audits of performance and compliance
  
- 2 regulatory bodies enforce compliance:
  - DPIE - compliance with conditions of approval under EP&A Act
  - EPA - adherence to the POEO Act and EPLs

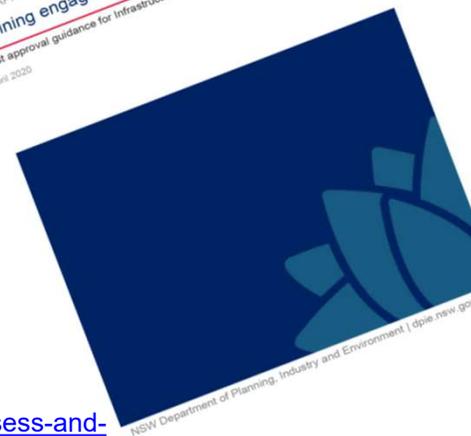
# Post approval guidance

<https://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Planning-Approval-Pathways/State-Significant-Development>

<https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/ssi-standard-conditions-of-approval-linear-infrastructure-2018-09.pdf?la=en>



NSW Department of Planning, Industry and Environment | dpipe.nsw.gov.au



<https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Compliance-policy-and-guidelines>



# Reflections on 20 years of EIA and enforcement

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- Feedback loop between EIA and post approval / enforcement is critically important
- Conditions need to be unambiguous to improve compliance and enforcement
- Building flexibility is important to encourage innovation and improvement
- Ability to enforce compliance is essential
- Focusing on enforcement can discourage openness about what didn't work

# Southeast Asia

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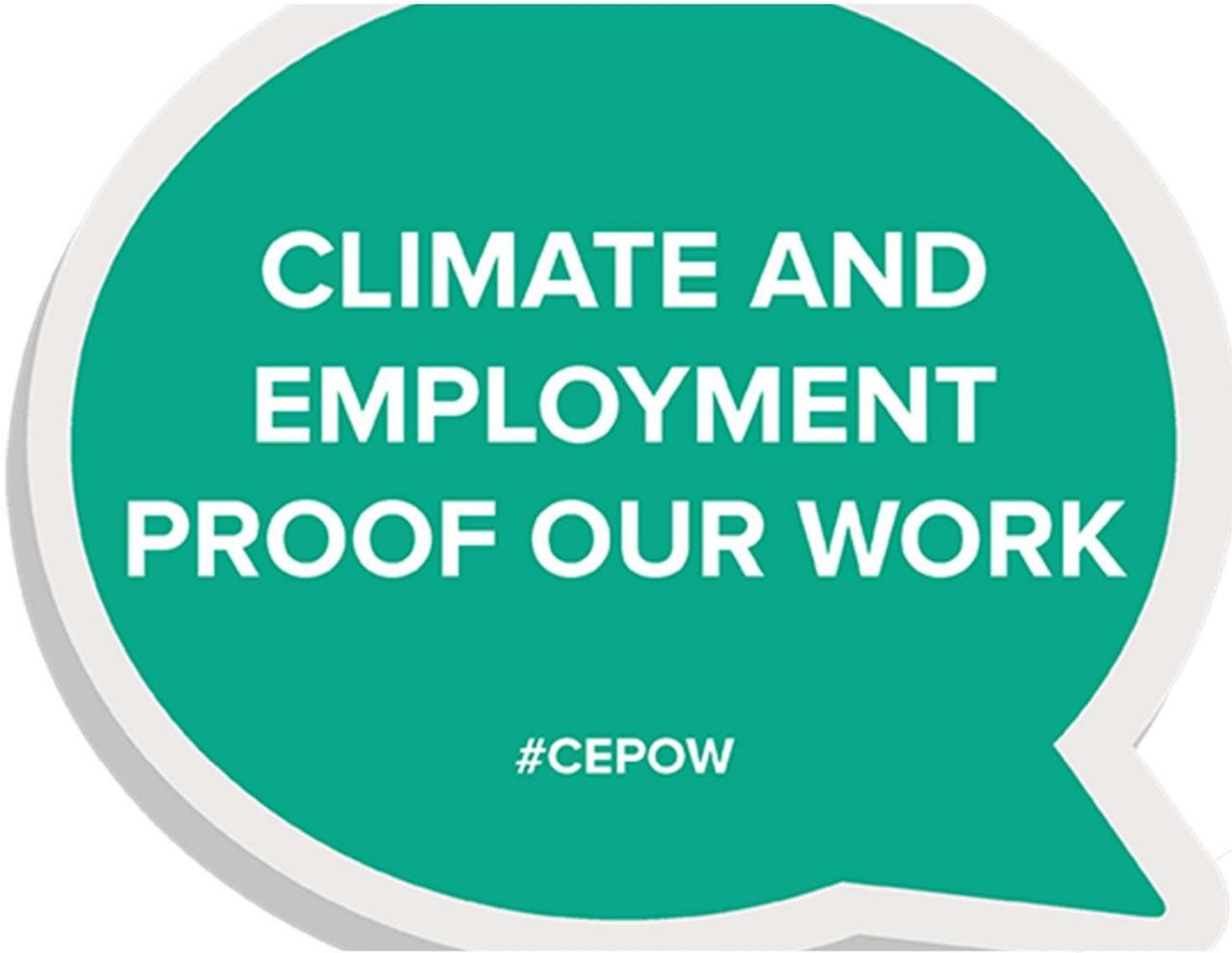
**Matthew Baird,**  
Director, Asian Research  
Institute for Environmental  
Law, lawyer and consultant



# Enforcement and Compliance: SE Asia Perspectives

**Matthew Baird, Director**

Asian Research Institute for Environmental Law



**CLIMATE AND  
EMPLOYMENT  
PROOF OUR WORK**

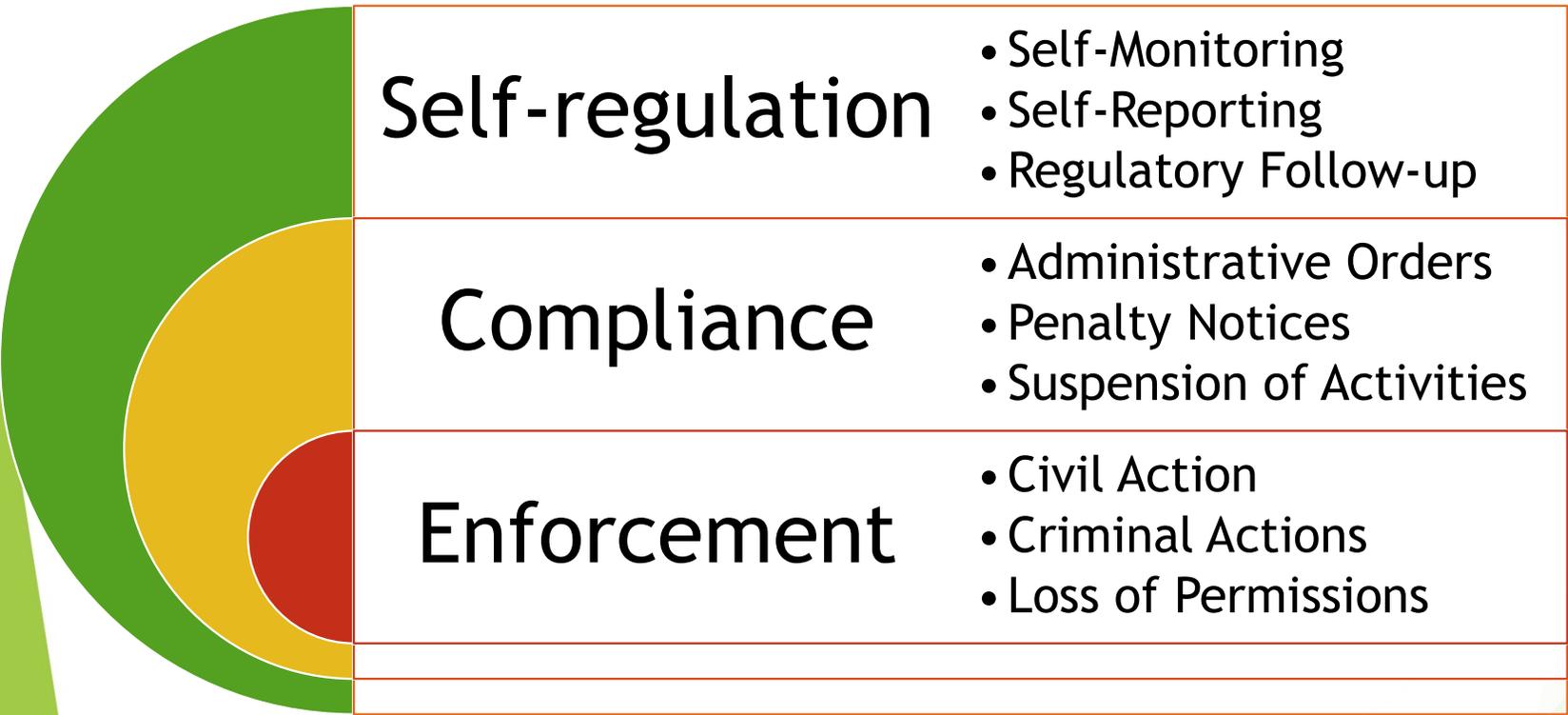
**#CEPOW**

## Cambodia experience 2015-2018

### Parallels Myanmar Experience

- ▶ Weakness in regulatory capacity
- ▶ Challenges in impartial enforcement
- ▶ Lack of experience by legal system
- ▶ No pollution permit system in place
- ▶ Regular visits to facility sites but challenges with independent verification and testing

## How do we frame compliance and enforcement?



### Self-regulation

- Self-Monitoring
- Self-Reporting
- Regulatory Follow-up

### Compliance

- Administrative Orders
- Penalty Notices
- Suspension of Activities

### Enforcement

- Civil Action
- Criminal Actions
- Loss of Permissions

# Solutions proposed in the draft EIA Law and the draft Environmental Code for Cambodia

- ▶ Separate Title on Environmental Audits, Monitoring and Reporting
  - ▶ Provision for independent audit with power to make recommendations
  - ▶ Requirements for reporting for holders of permits and approvals
  - ▶ Public availability of information
  - ▶ Public participation with the finalizing of EMP for project EIA
- ▶ Provisions made for risk assessment and requirement for financial institutions
- ▶ Establishment of permit scheme for air pollution, water pollution, waste, hazardous substances and Pollutant Release and Transfer Register

# Solutions proposed in the draft EIA Law and the draft Environmental Code for Cambodia

- ▶ Enforcement
  - ▶ Administrative Orders
  - ▶ Establishment of Environment and Natural Resources Mediation Committee at local, provincial and national level
  - ▶ Establishment of specialized Environment and Natural Resources Court (civil and criminal jurisdiction)
  - ▶ Broad standing - any person to bring complaints
- ▶ Focus on public engagement for reporting offences and incidents
- ▶ Breach of permits, approvals etc can lead to suspension of the project or cancellation of the permits
- ▶ Establishment of process for restoration and compensation for environmental harm

# Myanmar's approach to compliance for EIA through use of Environmental Compliance Certificates

- ▶ Environmental Compliance Certificates (ECC)
  - ▶ Issued by Ministry of Natural Resources and Environmental Conservation under EIA Procedure 2015
- ▶ Currently no process for issuing pollution permits except through ECC
- ▶ ECC conditions include the following requirements
  - ▶ Annual reporting
  - ▶ Insurance requirements, bonds, financial guarantees
  - ▶ Community Consultation Committees
  - ▶ Project Grievance Redress Mechanism (GRM)
  - ▶ Independent Environmental Audit
  - ▶ Focus on self-monitoring with mandatory notifications of breaches
- ▶ System still being implemented.

## ■ Discussion

- Unenforceable commitments: Drafting – who how why when
- Moving Target problem --Modifications to proposal after approval
- Legal form of commitments – Permits/licenses, Decision documents, EsIA
- Timeframe and stages: Site prep, construction, operation, closure
- Monitoring
- Citizen role and grievance procedures
- Government, self certification and reporting, third parties
- Consequences for non-compliance
- Intergovernmental relationships

**BOTTOM LINE:** What would be your top take away messages and lessons?



What would be your top take away  
messages and lessons?



- Questions



# What else does IAIA have to offer?

Visit [www.iaia.org](http://www.iaia.org)

- Webinars On Demand
- Online Professional Development Program with mentorship
- Annual IAIA conference (with pre-conference training courses)
- Online Symposium in October 2020
- Best Practice Principles, IA FasTips, and more



**Thank you!**



Next webinar:

## Related resources:

<https://iaia.org/webinars.php>

[www.inece.org/webinars](http://www.inece.org/webinars) with IADB: <https://inece.org/events/show/EventItem-449>

INECE/IADB-2018	Speakers from
<b>ESIA and Enforcement at the National Level</b>	Inter-American Development Bank and INECE
<b>ESIA and Enforcement in Transboundary and Regional Contexts</b>	Asian Environmental Compliance and Enforcement Network; Brazilian Institute of Environment and Renewable Natural Resources (IBAMA)
<b>ESIAs, Public Participation, and Environmental Compliance</b>	Inter-American Development Bank; Head of Secretariat, Asian Environmental Compliance and Enforcement Network
<b>ESIA and the World Bank's New Environmental and Social Framework: Challenges and Opportunities</b>	Environmental and Social Safeguards, World Bank
IADB/REDLAFICA/INECE, May - July 2020	Speakers from
<b>Virtual Stakeholder Consultation in During COVID-19</b>	Interamerican Development Bank (IADB), Chile Environmental Evaluaction Service (SEA), Guyana EPA, Canada
<b>Ensuring Socioenvironmental Compliance from a Social Distance</b>	National Environmental Licensing Authority (ANLA), Colombia, , Environmental Evaluation and Enforcement Organism (OEFA), Peru Interamerican Development Bank (IADB), National Enforcement Investigations Center, US EPA
<b>Enforcement and Licensing Discretion in Moments of Crisis</b>	Interamerican Development Bank (IADB), Office Enforcement and Compliance Assurance, U.S. Environmental Protection Agency (USEPA), Superintendence of the Environment (SMA), Chile, Environment and Climate Change, (EC), Canada, Chamber of Industry of Guatemala
<b>Institutionalizing Lessons Learned from Emergencies</b>	To be Determined
<b>Interacting with Indigenous Peoples</b>	To be Determined