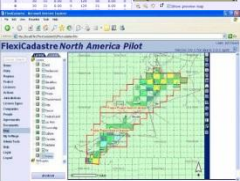
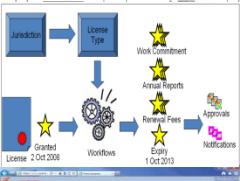
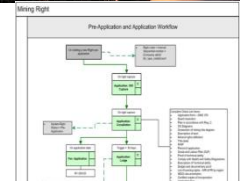




Environmental and Drilling Permit Management



Rogério Castejon - Manager South America, Spatial Dimension

Felipe Allegretti - Business Analyst South America, Spatial Dimension

Spatial Dimension in Latin America

Countries / Jurisdictions

- Argentina
- Brasil
- Chile
- Colombia
- Ecuador
- Mexico
- Guatemala
- Peru

Companies

- AngloGold Ashanti
- Barrick Gold
- GoldCorp
- Hochschild Mining
- Kinross
- Pan American Silver
- RTX
- Vale

Other Companies COMING SOON!!!



Pan American Silver - Overview

Founded 1994, based on Vancouver – Canada

- Second largest primary silver mining company in the world
- Seven operating silver mines in:
 - Peru
 - Bolivia
 - Mexico
 - Argentina
- Very important project under development:
 - Navidad Silver deposit and La Preciosa
- Market Capital US\$3.1 Billion @ Sept,30 2011
- www.panamericansilver.com



Pan American Silver - Overview



Source: Pan American Silver home page

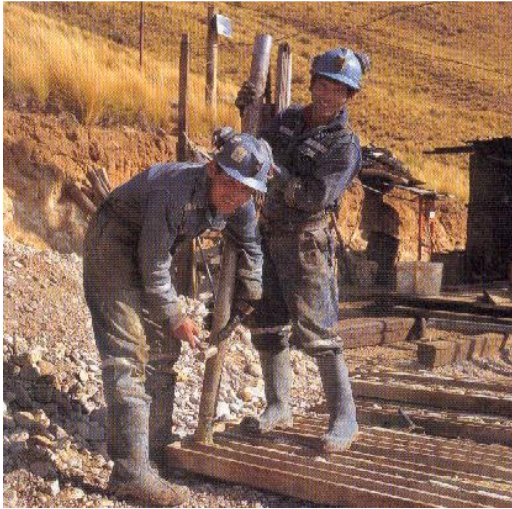
Peru - Overview

- World Producer:
 - ❖ Second Silver and Zinc
 - ❖ Third Cooper and Tin
 - ❖ Forth Molybdenum
 - ❖ Sixth Gold
- Mining represents ~ 21% of country GDP
- Modern institutional framework for mining concessions
- Increased concern on environment and communities



Peru – Environment Regulation (all stages)

Exploration



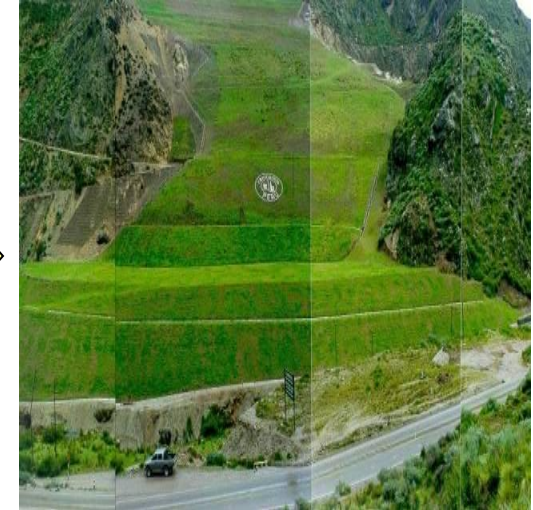
- Declaración Jurada
- Evaluación Ambiental
- Declaración de Impacto Ambiental
- Declaración de Impacto Ambiental Semidetallado

Exploitation/Process



- Estudio de Impacto Ambiental
- Programa de Adecuación y Manejo Ambiental
- Estudio de Impacto Ambiental Semidetallado

Closure

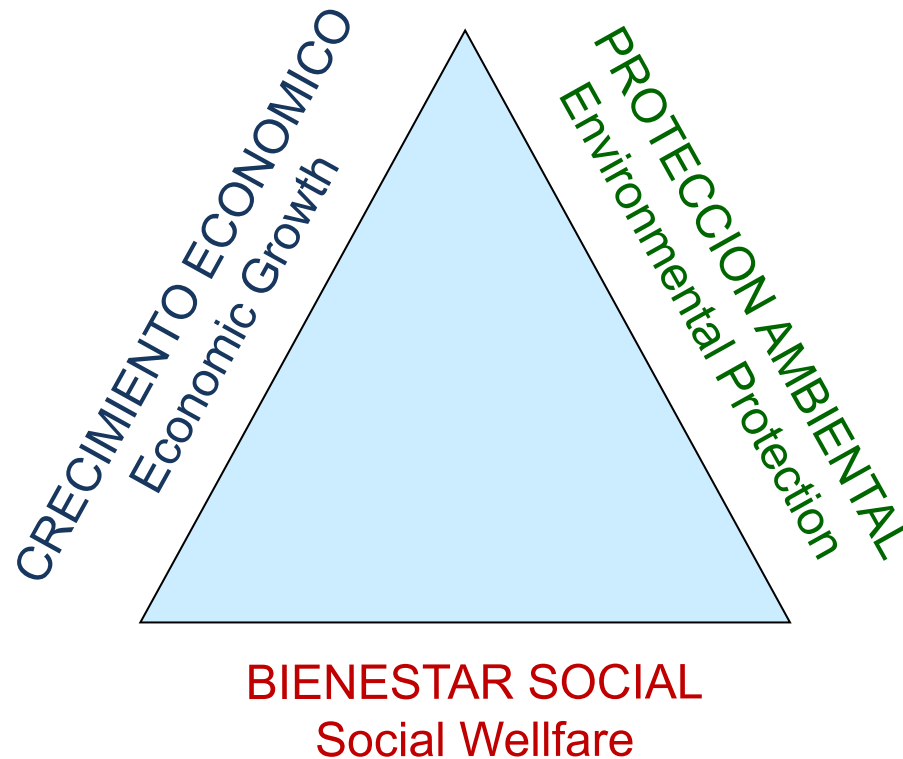


- Plan de Cierre de Minas
- Plan de Cierre de Pasivos Ambientales Mineros

Source: Ministerio de Energía y Minas Perú

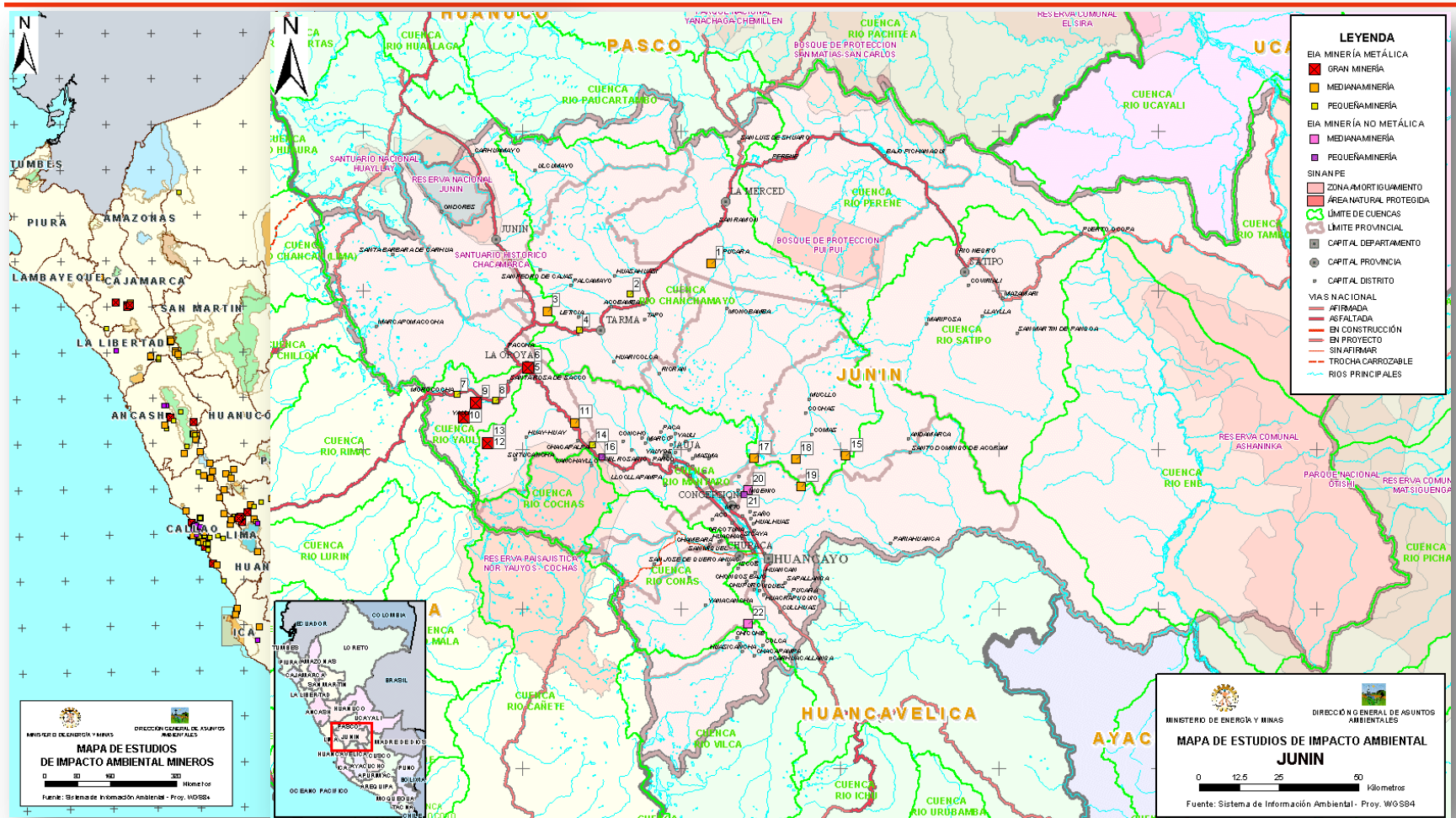
Peru – Sustainable Development

DESARROLLO SOSTENIBLE



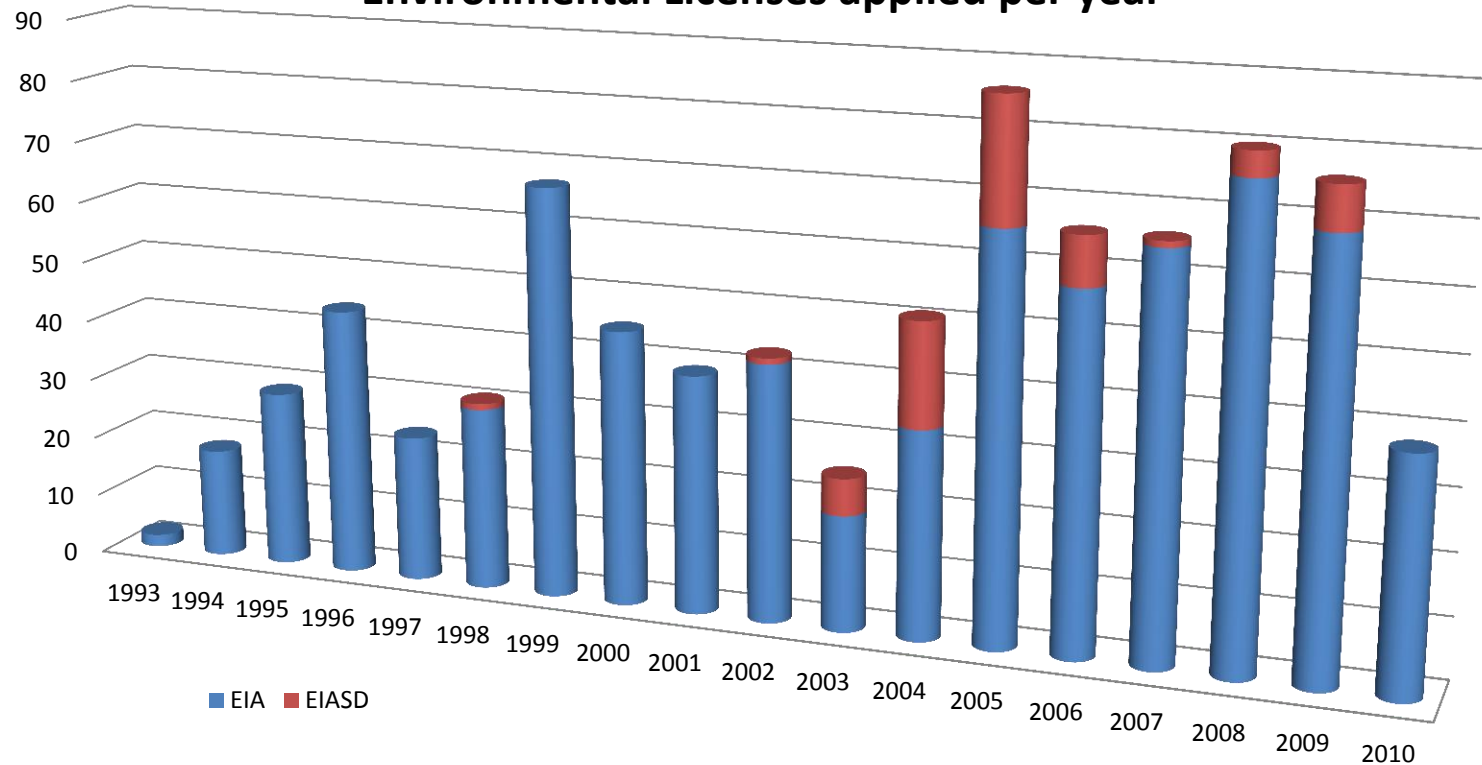
Source: Ministerio de Energía y Minas Perú

Peru – Sustainable Development



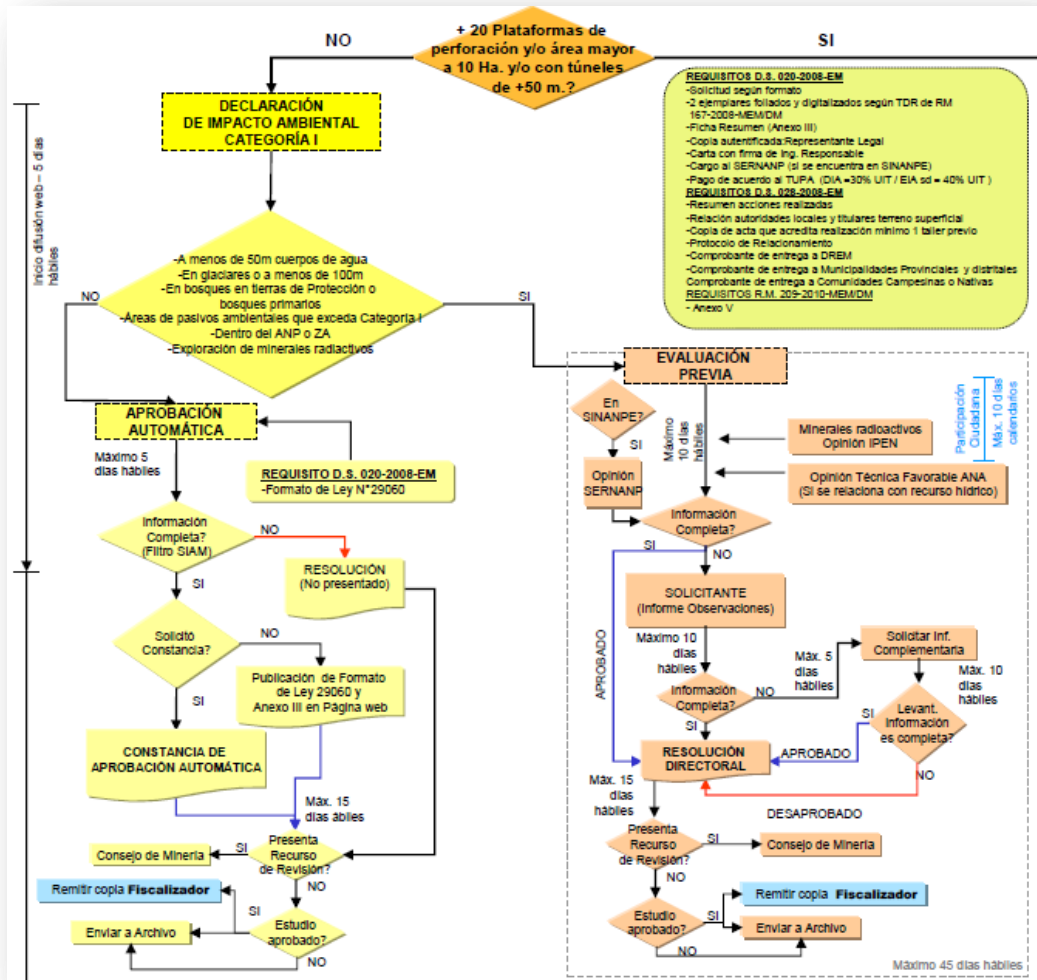
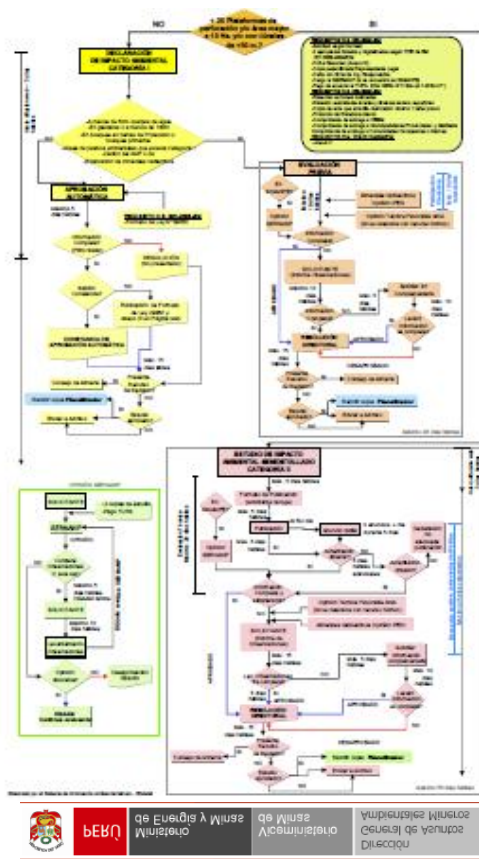
Peru – Sustainable Development

Environmental Licenses applied per year

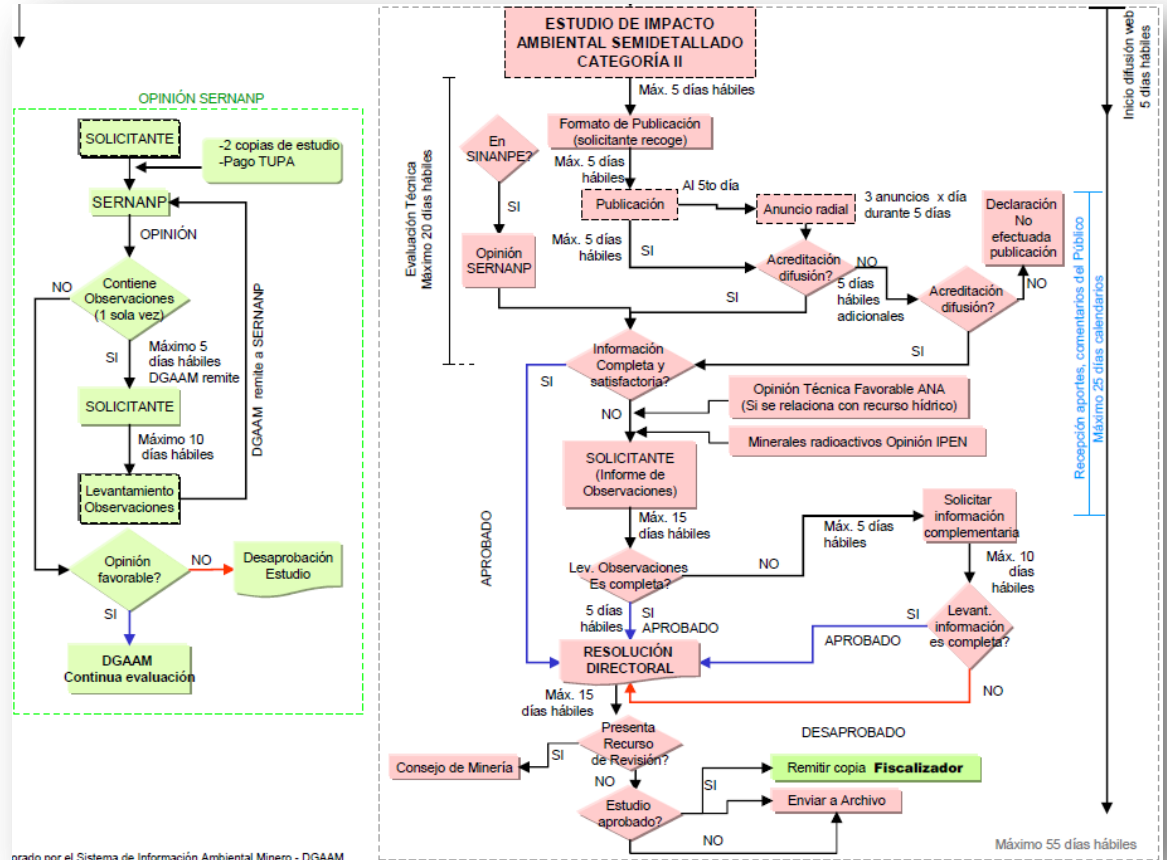
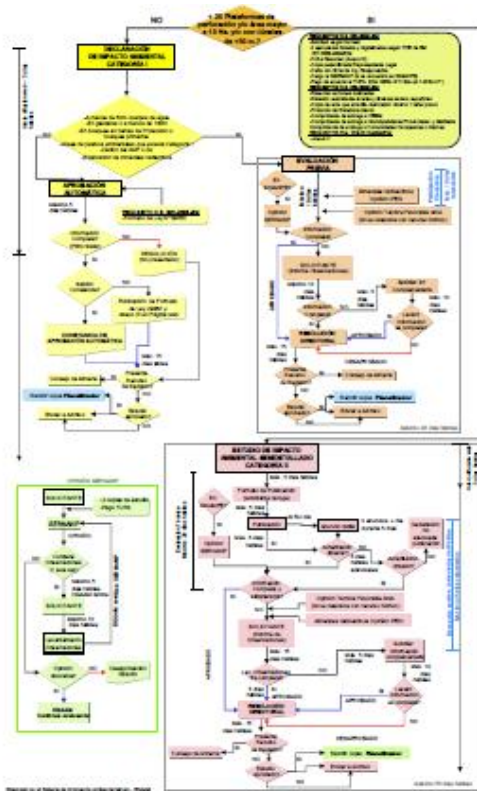


	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EIA	2	18	29	44	24	30	67	45	39	42	19	34	66	58	65	76	69	38
EIASD						1				1	6	17	20	8	1	4	7	

Peru – Environmental Permits for Drilling (1)



Peru – Environmental Permits for Drilling (2)



orado por el Sistema de Información Ambiental Minero - DGAAM

Peru – Environmental Permits for Drilling

+ 20 drilling platforms

and/or

Area larger than 10ha

and/or

Tunnels larger than +50 m

Then  EIA-SD

Else  DIA

Peru – Environmental Permits for Drilling

In our implementation for Pan American Silver Peru...

Declaración Jurada: A template form generated for the application – Affidavit commitment with good environmental practices

Declaración de Impacto Ambiental – DIA: - Modeled in FlexiCadastre as the License Type PE:DIA – “Environment Impact Declaration” is more than an affidavit but a simplified process

Estudio de Impacto Ambiental Semidetallado - EIA-SD: Modeled in FlexiCadastre as the License Type PE:EIA-SD – “Semi Detailed Environment Impact Study”

Peru – Environmental Permits for Drilling

Objectives:

- Implement the Drilling permits process into FlexiCadastre in order to acquire the drilling permits on time
- Integrate information related to Land Management and the Exploration process
- Have all documentation related to the process at hand
- Comply with all the obligations related to the environmental permits

Peru – Environmental Permit: DIA

The Process

Before Presenting the Application to the responsible authority

- Prepare documentation
- Apply for permits for water consumption
- Negotiate with land owner / community

After the Presentation

- Environmental Agency resolution
- License granting

After the Drilling process

- Initiate the Environmental Closure
- Communicate to the Government Agency about the closure
- Closure “accepted”

Peru – Environmental Permit: DIA

Workflow diagram



Peru – Environmental Permit: DIA

Workflow diagram



Peru – Environmental Permit: DIA

Open and Closed Actions

Acciones Directas

There are 10 acciones en la lista. Reporte Exportar

Eliminar	Todos	Tipo	Estado	Acción	Comentarios	Yence	Completado	Días Restantes	Acciones Hechas
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Revisar: Acuerdo con Superficie		13/12/2010	13/12/2010		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Solicita: Permiso o Autorización de Uso de Agua		13/12/2010	13/12/2010		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Presenta: Solicitud ante Autoridad Local		08/01/2011	27/12/2010		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Presenta: Solicitud al Ministerio		13/01/2011	13/01/2011		3
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Informa: Plazo Estimado de Trámite		01/12/2011	13/01/2011		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Resolución: Resuelve Solicitud Permiso Ambiental (Decisión: Sin Observaciones)		28/01/2011	25/01/2011		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Recoge: Constancia de Aprobación Permiso Ambiental		27/01/2011	02/02/2011		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Presenta: Escrito Comunica Inicio de Trabajos (DIA)		03/02/2011	03/02/2011		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Inicia: Solicitud de Permiso Ambiental		30/11/2011	30/11/2011		
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Informa: Fecha de Expiración del Permiso		02/02/2011	02/02/2013		

Acciones Directas

There are 2 acciones en la lista. Reporte Exportar

Eliminar	Todos	Tipo	Estado	Acción	Comentarios	Yence	Completado	Días Restantes
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Expiración del Permiso Ambiental		02/02/2013		360
<input checked="" type="checkbox"/>	<input type="checkbox"/>			Inicia: Actividades de Cierre Ambiental		02/02/2013		360

Peru – Environmental Permit: EIA-SD

The Process

Before Presenting the Application to the responsible authority

- Prepare documentation
- Apply for permits for water consumption
- Negotiate with land owner / community

After the Presentation

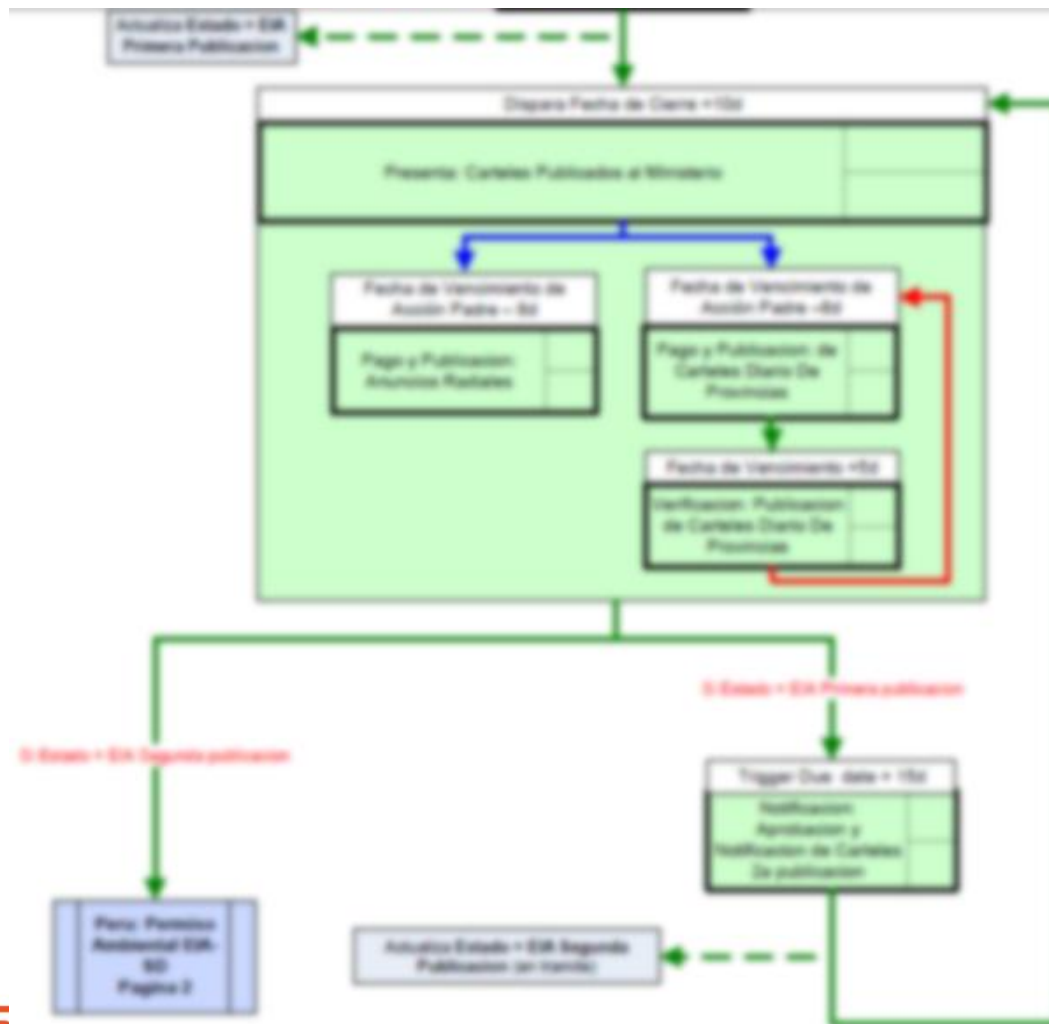
- Publication (radio broadcast and papers)
- Environmental Agency analysis and resolution
- License granting
- Communicate start of work

After the Drilling process

- Initiate the Environmental Closure
- Communicate the Government Agency about the closure
- Closure “accepted”

Peru – Environmental Permit: EIA-SD

Workflow Diagram



Peru – Environmental Permit: EIA-SD

Workflow Diagram



Peru – Environmental Permit: EIA-SD

Workflow Diagram



Peru – Environmental Permit: EIA-SD

Open and Closed Actions

Acciones Directas

There are 8 acciones en la lista. Reporte Exportar

Eliminar	Todos	Tipo	Estado	Acción	Comentarios	Vence	Completado
<input type="checkbox"/>	<input type="checkbox"/>			negocia_Acuerdo con Superficie		29/03/2011	29/03/2011
<input type="checkbox"/>	<input type="checkbox"/>			Solicita_Permito y Autorizacion de Uso de Agua		29/03/2011	26/04/2011
<input type="checkbox"/>	<input type="checkbox"/>			Presenta_Solicitud ante Autoridad Local		24/04/2011	23/04/2011
<input type="checkbox"/>	<input type="checkbox"/>			Informa_Plazo Estimado de Trámite		29/04/2011	29/04/2011
<input type="checkbox"/>	<input type="checkbox"/>			Pago_Derecho de Trámite (S/ 1.460.00 to MEM: Ministerio de Energía y Minas)		29/04/2011	29/04/2011
<input type="checkbox"/>	<input type="checkbox"/>			Presenta_Solicitud al Ministerio		29/04/2011	29/04/2011
<input type="checkbox"/>	<input type="checkbox"/>			Informa Contabilidad_Nuevo Permiso Ambiental Creado		02/05/2011	02/05/2011
<input type="checkbox"/>	<input type="checkbox"/>			Inicia_Solicitud de Permiso Ambiental		04/01/2012	05/01/2012

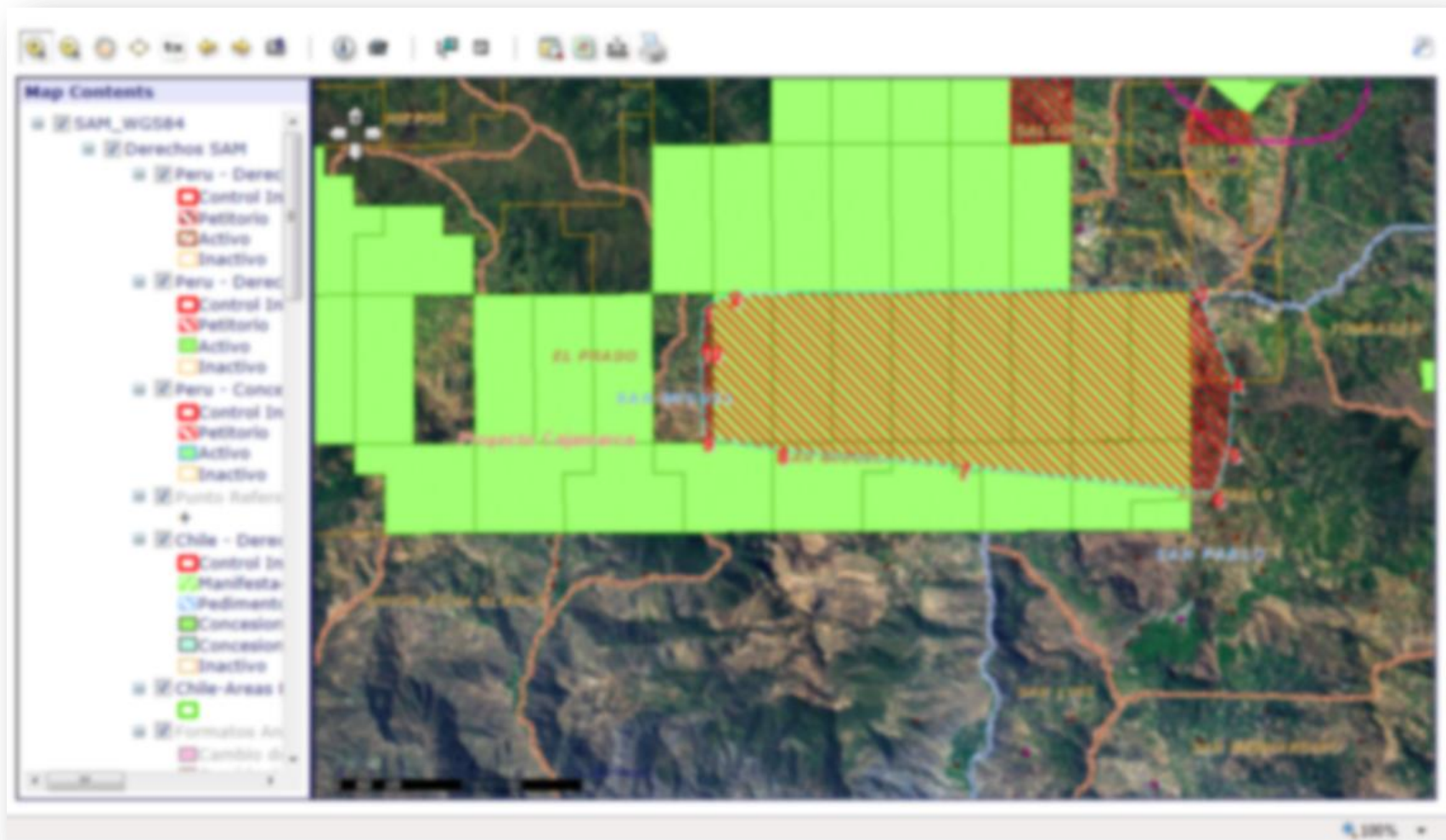
Acciones Directas

There are 1 acciones en la lista. Reporte Exportar

Eliminar	Todos	Tipo	Estado	Acción	Comentarios	Vence	Completado
<input type="checkbox"/>	<input type="checkbox"/>			Notificacion_Aprobacion y Notificacion de Carteles de Publicacion		14/05/2011	

Peru – Environmental Permit: EIA-SD

The Map



Expectations and Conclusions

- All obligations within the process will be done on time
- Information related to Land Management and to the Environment process integrated in a single database
- Anticipation of requirements for Environment process within the Exploration objectives
- Improve communication between the Land, Environment and Exploration groups
- All documents related to the environmental permits are uploaded and accessible in FlexiCadastre
- Adds value to company's investment in FlexiCadastre

Q&A

OBRIGADO!

GRACIAS!

THANKS!