

ITL Interactive Exercise

RDA,
UNFCCC

Bonn, Germany
June 7, 2008



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Background Information

- **Required in Decision 12/CMP.1**
- **Objective:**
 - Demonstrate how ITL and Registry Systems work in an integrated way following the rules of the Kyoto Protocol
- **Technical set up organized by the UNFCCC - ITL team**
 - Use of local test environment at the UNFCCC
 - Use test data rather than production numbers and information about projects



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Event format

- **Part I (approx. 2 hours)**
 - Lecture format: showing concepts involved in ITL and registry systems, alternating with live demonstration of 4 systems (ITL, CDM Registry, New Zealand Registry and Austrian Registry) with pre-defined scenarios
- **Part II (approx. 2 hours)**
 - Three different groups: through a different set of pre-defined scenarios involving CDM, NZ and AT registries, participants will have a chance to interact with the user interface of each registry and the ITL



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Agenda

- **Introduction**
- Emissions Trading and the ITL
- Joint Implementation (JI) and the ITL
- Clean Development Mechanism (CDM) and the ITL
- Reconciliation
- Break
- Interactive Scenario



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The Kyoto Protocol

- Legally binding agreement adopted as a protocol to the UNFCCC. Ratified by 181 countries and 1 regional economic organisation
- Sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions
- Goal - to reduce the collective emissions of greenhouse gases in industrialized countries by at least 5% compared to 1990 in the commitment period from 2008 to 2012



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Kyoto Mechanisms

- Under the Treaty, countries must meet their targets primarily through national measures.
- However, the Kyoto Protocol offers them an additional means of meeting their targets by way of three market-based mechanisms:
 - **Emissions trading**
 - **Joint implementation (JI)**
 - **Clean development mechanism (CDM)**
- The mechanisms help stimulate green investment and help Parties meet their emission targets in a cost-effective way



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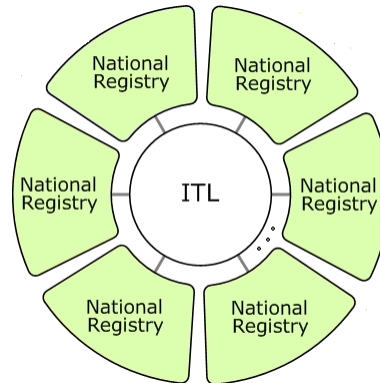
ITL – International Transaction Log

- **Registries**

- Governments of the 38 Annex B Parties are implementing **national registries**
- Registry contains accounts which held units in the name of the government or entities authorized by the government to hold and trade units.

- **ITL**

- Each registry linked to **International transaction log**
- The ITL verifies registry transactions, in real time, to ensure they are consistent with rules of the Kyoto Protocol.
- The ITL requires registries to terminate transactions they propose that are found to infringe upon the Kyoto rules.

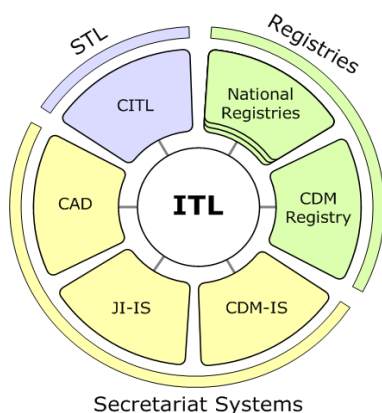


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ITL – International Transaction Log (cont.)



- **CDM Registry**

- Issuing CDM credits and distributing them to national registries

- **Secretariat Systems**

- CDM-IS
- JI-IS
- CAD

- **CITL**

- Community Independent Transaction Log – supplementary transaction log for EU trading scheme (EU-ETS)

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The data exchange standards (DES)

- Why is a standard needed?
 - To ensure compatible communication between the registries
 - To ensure secure communication
 - To coordinate transaction processing between the registries
 - To ensure conformity with the Kyoto Protocol
- DES (data exchange standards) for Registry Systems under the Kyoto Protocol: a technical specification for data exchange between registries, the ITL and the STL's.
- All registries (including CDM), CITL and ITL must adhere to the DES



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Units, Accounts and Transactions

- Registries record the holdings of Kyoto **units**, and any **transactions** involving them, through a structure of **accounts**.
 - Similar to the way that banks record balances and movements in money using accounts allocated to individuals or other entities.
- One Kyoto **unit** is the equivalent of 1 tonne of CO₂
- Initial assigned amount for each Annex-B Kyoto Party is represented in AAUs (Assigned Amount Unit)
- Five other types of units



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Units, Accounts and Transactions (cont.)

- Units are typically held in **holding accounts**
- Other types of accounts exist for specific purposes, for example:
 - **cancellation** account – to store cancelled units
 - **retirement** account – to put aside all units which a Party wants to use to demonstrate compliance with Kyoto target
 - ...
- Units are moved from one account to another by the means of **transactions**.
 - Some transactions may not actually move the units, but merely change some unit attributes



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Emissions Trading and the ITL

- An Annex-B Party may transfer Kyoto units to, or acquire units from another Annex-B Party
- No limit on number of units that may be acquired
- Commitment period reserve (CPR) –minimum holdings of a registry, which limits the number of units that can be transferred at a point in time

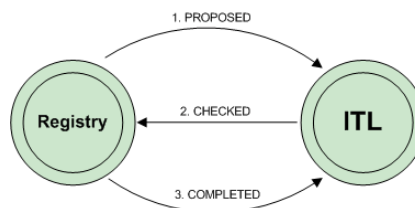


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Issuance

- Annex-B have emission targets, expressed as levels of allowed emissions, or “**assigned amounts**” over the 2008-2012 commitment period
 - Example: Japan’s assigned amount = 5,928,257,666 (AAUs)
- Before engaging in trading, Party **issues** (creates) AAU units in its national registry
- ITL will check that issuance proposal does not violate Kyoto rules. For example, that the number of units to be issued is not over the assigned amount.



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Demonstration 1

ISSUANCE IN NATIONAL REGISTRY

What will be demonstrated:

1. **Successful issuance of AAUs in New Zealand registry**
2. Failed issuance of AAUs in New Zealand registry (over the limit) – blocked by the ITL



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Demonstration 1

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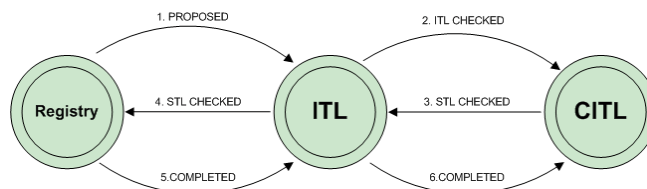
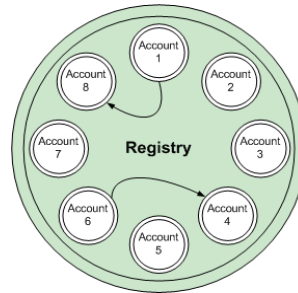


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Internal Transfer

- Registries may transfer units between internal holding accounts without ITL's involvement
 - e.g. to support national trading schemes
- Some types of internal transfers do go through the ITL, e.g. when the STL is involved
 - e.g. when regulated by a regional GHG trading scheme



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Demonstration 2

INTERNAL TRANSFER

What will be demonstrated:

1. Two internal transfers in New Zealand:

- Completed in the registry
- Not processed by the ITL

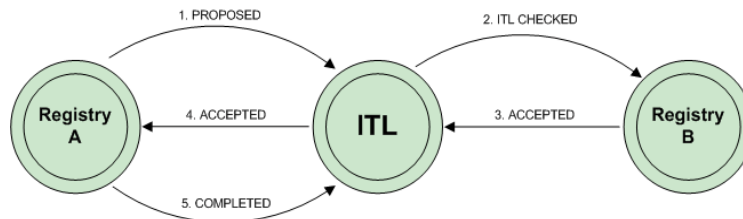
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External Transfer

- External Transfer refers to the transfer of units from one registry to another.



- ITL will prevent any external transfers which are not according to the Kyoto Protocol rules
 - E.g. In case registry holdings drop below the Commitment Period Reserve Level.

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Demonstration 3

EXTERNAL TRANSFER

What will be demonstrated:

- Attempt to perform external transfer from New Zealand to Austria when New Zealand holdings are below the CPR (transaction fails)**
- Issuance in New Zealand registry (to resolve CPR problem)
- New attempt to perform external transfer from New Zealand to Austria (now successful)

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Demonstration 3

EXTERNAL TRANSFER

What will be demonstrated:

1. Attempt to perform external transfer from New Zealand to Austria when New Zealand holdings are below the CPR (transaction fails)
- 2. Issuance in New Zealand registry (to resolve CPR problem)**
3. New attempt to perform external transfer from New Zealand to Austria (now successful)



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Demonstration 3

EXTERNAL TRANSFER

What will be demonstrated:

1. Attempt to perform external transfer from New Zealand to Austria when New Zealand holdings are below the CPR (transaction fails)
2. Issuance in New Zealand registry (to resolve CPR problem)
- 3. New attempt to perform external transfer from New Zealand to Austria (now successful)**



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Joint Implementation (JI) and the ITL

- Defined by Article 6 of the Kyoto Protocol
- One Annex-B Kyoto party can invest in a project that reduces emissions in another Annex-B Kyoto party and receive credits for the resulting reductions/removals
- The unit associated with JI is called an **emission reduction unit (ERU)**
- ERU units cannot be issued, they are only converted from other units

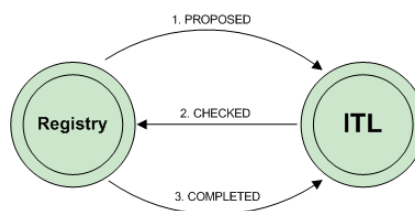


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Transaction: Conversion

- The Conversion transaction is the process of converting units (AAUs or RMUs) into ERUs on the basis of a JI Project.
- The ITL must recognize the JI project referred to by the transaction proposal
- The Joint Implementation IS informs the ITL of project identifiers
- Transaction flow is the same as in the case of issuance:



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Demonstration 4

CONVERSION

What will be demonstrated:

1. Successful conversion transaction in New Zealand registry:

- Project exists in ITL
- Registry proposes transaction
- Transaction completes

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Clean Development Mechanism (CDM) and the ITL

- Defined in Article 12 of the Protocol
- Allows an Annex-B party (with commitment under the Kyoto Protocol) to implement an emission-reduction project in non-Annex I party (without commitment under the Kyoto protocol).
- The units associated with CDM projects are called **certified emission reduction units (CER)**:
 - Created in CDM Registry, by performing an **issuance** transaction, based on approved CDM project
 - Forwarded to the industrialized Party which has invested in the project, using the **external transfer** transaction



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Demonstration 5

ISSUANCE IN CDM REGISTRY

What will be demonstrated:

1. **Performing valid issuance of CERs (all project parameters correct)**
 - **Proposed to the ITL**
 - **Validated and completed**
2. Attempting invalid issuance of CERs (above the limit of the CDM project):
 - Proposed to the ITL
 - Terminated



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Demonstration 5

ISSUANCE IN CDM REGISTRY

What will be demonstrated:

1. Performing valid issuance of CERs (all project parameters correct)
 - Proposed to the ITL
 - Validated and completed
2. **Attempting invalid issuance of CERs (above the limit of the CDM project):**
 - **Proposed to the ITL**
 - **Terminated**



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Demonstration 6

CDM FORWARDING

What will be demonstrated:

1. **Attempting a valid external transfer from CDM to New Zealand, but to the invalid (non-existing) account:**
 - **Proposed to the ITL; ITL accepts**
 - **However: Registry rejects; finally terminated**
2. Repeated transaction, this time with correct registry account identifier
 - Proposed to the ITL, accepted and completed



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Demonstration 6

CDM FORWARDING

What will be demonstrated:

1. Attempting a valid external transfer from CDM to New Zealand, but to the invalid (non-existing) New Zealand account:
 - Proposed to the ITL; ITL accepts
 - However: Registry rejects; finally terminated
2. **Repeated transaction, this time with correct registry account identifier**
 - **Proposed to the ITL, accepted and completed**



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ITL Notifications

- The ITL uses **Notifications** to inform registries of actions that must be performed
- Frequently notifications demand that a registry cancels some units (e.g. based on CDM executive board compliance review)
- Registry is given time to react (typically 30 days)
- 11 types of notifications are defined, each having a specific purpose



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Expiry Date Change

- It is possible that tCERs or ICERs will have their expiry date changed. If this is the case, the ITL will notify registries of the affected units and the new expiry date using the **expiry date change notification**.
- To fulfill the notification, registry must change the expiry date as instructed, using the **expiry date change transaction**
- Expiry Date Change is required when the underlying project's crediting period end date changes



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Demonstration 7

EXPIRY DATE CHANGE FOR CDM PROJECT

What will be demonstrated:

1. **Examining the Expiry date notification sent to the New Zealand registry**
2. Fulfilling the notification by Expiry Date Change transaction in the New Zealand registry
3. Triggering Notification Update from the ITL



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Demonstration 7

EXPIRY DATE CHANGE FOR CDM PROJECT

What will be demonstrated:

1. Examining the Expiry date notification sent to the New Zealand registry
2. **Fulfilling the notification by Expiry Date Change transaction in the New Zealand registry**
3. Triggering Notification Update from the ITL



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Demonstration 7

EXPIRY DATE CHANGE FOR CDM PROJECT

What will be demonstrated:

1. Examining the Expiry date notification sent to the New Zealand registry
2. Fulfilling the notification by Expiry Date Change transaction in the New Zealand registry
3. **Triggering Notification Update from the ITL**



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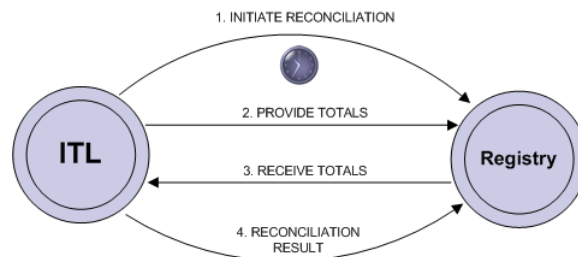


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Reconciliation

- The record of unit block holdings held by registries is reconciled periodically with data in the ITL; this process is called **Reconciliation**



- Typically run automatically on a daily basis
- Procedures are in place for identifying and resolving any inconsistencies discovered

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Demonstration 9

RECONCILIATION

What will be demonstrated:

- Running the reconciliation from the ITL-AA**
- Examining reconciliation results

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Demonstration 9

RECONCILIATION

What will be demonstrated:

1. Running the reconciliation from the ITL-AA
- 2. Examining reconciliation results**



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Thanks for your attention !

- Any questions?
- For additional information:
 - **Official business and general inquiries:**
secretariat@unfccc.int
 - **UNFCCC**
<http://unfccc.int>
 - **ITL**
http://unfccc.int/kyoto_protocol/registry_systems/itl/items/4065.php
 - **DES**
http://unfccc.int/files/kyoto_mechanisms/registry_systems/application/pdf/des_techspeg_v1_1.pdf



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