Online Appendix for "Linked Data for the International Aid Transparency Initiative"

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December 23, 2013

APPENDIX

A. IATI MODEL

A.1 Activity example

Below an example activity IATI XML file is shown, containing actual data of activity ID "GB-CHC-285776-CHA024". We have added several elements and attributes which are not in the original XML file, such as the <website> and <location> elements and the @version and @linked-datauri attributes within the <iati-activity> element, in order to give a complete overview of the data an IATI XML file can contain.

The original XML file can be retrieved from this address: http://www.cafod.org.uk/extra/data/iati/IATIFile_Chad.xml.

```
<iati-activity hierarchy="1" xml:lang="en" default-</pre>
          currency="GBP" last-updated-datetime=
          "2013-01-23T00:00:00" version="1.02"
          linked-data-uri="http://ld.cafod.[..]">
  <reporting-org ref="GB-CHC-285776" type="21">
    CAFOD
  </reporting-org>
  <iati-identifier>
    GB-CHC-285776-CHA024
  </iati-identifier>
  <other-identifier>
    CHA024
  </other-identifier>
  <iati-website>
    http://cafod.com/GB-CHC-285776-CHA024
  </iati-website>
  < t.it.le>
    Emergency support to individuals and
    households affected by food insecurity in
    Chad
  </title>
  <description type="1">
    This project is a contribution to Caritas
    Switzerland's emergency appeal for Chad
    (EA 15/2012). [..] CAFOD's contribution
    of 19,678 pounds will be earmarked
    towards the UNAD project activities.
  </description>
  <activity-status code="2">
    Implementation
  </activity-status>
  <default-tied-status code="5">
    Untied
  </default-tied-status>
  <activity-date type="start-actual"</pre>
          iso-date="2012-07-12"/>
  <activity-date type="end-planned"</pre>
          iso-date="2013-05-14"/>
  <contact-info>
    <organisation>CAFOD</organisation>
    <person-name>
      CAFOD Contact
    </person-name>
    <telephone>
      +44 (0) 1355 84 3132
```

</telephone>

```
Public Enquiry Point, Abercrombie House,
    Eaglesham Road, Glasgow G75 8EA
  </mailing-address>
  <email>cafod@cafod.org.uk</email>
</contact-info>
<participating-org role="Funding"</pre>
        ref="GB-CHC-285776">
</participating-org>
<participating-org role="Implementing">
  Caritas Switzerland National Office
</participating-org>
<recipient-country code="TD"</pre>
        percentage="100">
 Chad
</recipient-country>
<recipient-region percentage="100"</pre>
        code="289">
 South of Sahara, regional
</recipient-region>
<location percentage="100">
    <name>Herat</name>
    <coordinates latitude="34.341944"</pre>
        longitude="62.20305" precision="2"/>
    <location-type code="PPL" />
    <administrative country="AF">
      Afghanistan, Herat, Injil
    </administrative>
  <gazetteer-entry gazeteer-ref="GEO">
    1140026
  </gazetteer-entry>
</location>
<sector vocabulary="R0">
  Emergency Relief and Recovery
</sector>
<sector vocabulary="DAC" code="51010"</pre>
        percentage="100">
 General budget support
</sector>
<policy-marker vocabulary="DAC" code="04">
  Trade Development
</policy-marker>
<collaboration-type code="1">
 Bilateral
</collaboration-type>
<default-flow-type code="30">
 Private grants
</default-flow-type>
<default-aid-type code="C01">
  Project-type interventions
</default-aid-type>
<default-finance-type code="110">
  Aid grant excluding debt reorganisation
</default-finance-type>
<default-tied-status code="5">
 Untied
</default-tied-status>
<budget type="1">
  <period-start iso-date="2011-01-01"/>
  <period-end iso-date="2012-01-01"/>
  <value value-date="2011-10-01">
    700000
```

<mailing-address>

```
</value>
</budget>
<planned-disbursement>
  <period-start iso-date="2011-01-01"/>
  <period-end iso-date="2012-01-01"/>
  <value value-date="2011-10-01">
    700000
 </value>
</planned-disbursement>
<transaction ref="42737">
  <transaction-type code="IF">
    Incoming Funds
  </transaction-type>
 corg>CGF
 <value value-date="2012-05-15">19679</value>
 <transaction-date iso-date="2012-05-15">
    2012-05-15
 </transaction-date>
</transaction>
<transaction ref="56662">
  <transaction-type code="D">
   Disbursement
 </transaction-type>
 <receiver-org>
    Caritas Switzerland National Office
 </receiver-org>
 <value value-date="2012-07-20">19679</value>
 <transaction-date iso-date="2012-05-15">
    2012-05-15
  </transaction-date>
</transaction>
<document-link format="application/msword"</pre>
       url="http://www.cafod.net/[..]Final.doc">
  <title>Final doc</title>
 <category code="A04">
    Conditions
 </category>
 <language code="en" />
</document-link>
<related-activity type="1" ref="GB-1-105838">
 Trade Sector Programme
</related-activity>
<conditions attached="1">
  <condition>Activity condition
</conditions>
<result type="output"
        aggregation-status="false">
 <title>Grant Performance Report</title>
  <description type="1">
    This should show a clear result.
 </description>
  <indicator measure="NDP" ascending="true">
    <title>NDP</title>
    <description type="1">
      This should show an indicator.
    </description>
      <period-start iso-date="2011-01-01"/>
      <period-end iso-date="2012-01-01"/>
      <target value="N=42;P=57"/>
      <actual value="N=41;P=56"/>
    </period>
    <baseline year="2008" value="N=35;P=55">
```

A.2 Organisation example

Below an example organisation IATI XML file is shown, containing actual data of the "Department for International Development" organisation. We have added several elements which are not in the original XML file, such as the <reporting-org> and <recipient-org-budget> elements, in order to give a complete overview of the data an IATI XML file can contain.

The original XML file can be retrieved from this address: http://projects.dfid.gov.uk/iatixmlfiles/organisation.

```
<iati-organisation last-updated-datetime=</pre>
          "2012-08-23T12:43:16Z" xml:lang="en"
          default-currency="GBP">
  <iati-identifier>GB-1</iati-identifier>
    Department for International Development
  </name>
  <reporting-org ref="GB-1" type="60"</pre>
          xml:lang="en">
    Department for International Development
  </reporting-org>
  <total-budget>
    <period-start iso-date="2013-04-01">
      01 April 2013
    </period-start>
    <period-end iso-date="2014-03-31">
      31 March 2014
    </period-end>
    <value value-date="2010-10-20">
      11300000000
    </value>
  </total-budget>
  <recipient-country-budget>
    <recipient-country code="AF">
      Afghanistan
    </recipient-country>
    <period-start iso-date="2012-04-01">
      Start of Financial Year 2012/13
    </period-start>
    <period-end iso-date="2013-03-31">
      End of Financial Year 2012/13
    </period-end>
    <value currency="GBP" value-date=</pre>
          "2012-04-01">
      180445000
    </value>
  </recipient-country-budget>
  <recipient-org-budget>
    <recipient-org ref="41114" xml:lang="en">
```

```
United Nations Development Programme
    </recipient-org>
    <period-start iso-date="2012-04-01"/>
    <period-end iso-date="2013-03-31"/>
    <value currency="USD"</pre>
          value-date="2012-04-01">
      250000000
    <value>
  </recipient-org-budget>
  <document-link url="http://[..]report.pdf"</pre>
          format="application/pdf">
    <title>
      DFID Annual Report and Accounts 2011-12
    </title>
    <category code="B01">
      Annual report
    </category>
  </document-link>
</iati-organisation>
```

A.3 Codelist example

Below part of the codelist XML file for the "Aid Type" codelist is shown. The original XML file can be retrieved from this address: http://datadev.aidinfolabs.org/data/codelist/AidType/version/1.0/lang/en.xml.

```
<codelist name="AidType" date-last-modified=</pre>
          "2012-03-02T16:37:03.457Z" version="1.0"
          xml:lang="en">
  <AidType>
    <code>A01</code>
    <name>
      General budget support
    </name>
    <description>
      Unearmarked contributions to the government
      budget including funding to support the
      implementation of macroeconomic reforms [..]
      of earmarking the resources for specific uses,
      are therefore excluded.
    </description>
    <language>en</language>
    <category>A</category>
    <category-name>
      Budget support
    </category-name>
    <category-description>
      For contributions under this category, the donor
      relinquishes the exclusive control of its funds
      by sharing the responsibility with the recipient.
    </category-description>
  </AidType>
  <AidType>
    <code>A02</code>
    <name>Sector budget support</name>
    <description>
      Sector budget support, like general budget
      support, is a financial contribution to a recipient
      government's budget. However, in sector budget
      support, the dialogue between donors and partner
      governments focuses on sector-specific concerns,
      rather than on overall policy and budget priorities groups: [
```

```
</description>
<language>en</language>
  <category>A</category>
  <category-name>Budget support</category-name>
  <category-description>
   For contributions under this category, the donor relinquishes the exclusive control of its funds by sharing the responsibility with the recipient.
  </category-description>
  </AidType>
</codelist>
```

A.4 Metadata example

In this appendix, the JSON file for the "aa-organisation" XML file is shown. The original JSON file can be looked up using the IATI API on this location: http://www.iatiregistry.org/api/rest/dataset/aa-organisation.

```
{
  maintainer: null,
  maintainer_email: null,
  id: "e270697a-2baa-4f83-80aa-673cb63d4f32",
  metadata_created: "2011-10-12T16:27:40.682769",
  relationships: [],
  license: "OKD Compliant::Other (Attribution)",
  metadata_modified: "2012-03-17T00:48:08.233890",
  author: null,
  author_email: "",
  download_url:
    "http://maps.aidsalliance.org/iati/
        organisation.xml",
  state: "active",
  version: null,
  license_id: "other-at",
  resources: [
      mimetype: "text/xml",
      resource_group_id: "f01a2519-28b0-4117-869e-
        8ab5e690f3f8",
      hash: "5557a9c6821b3f71cc601307bb7c588726
        598f5e",
      description: "",
      format: "IATI-XML",
      url: "http://maps.aidsalliance.org/iati/
        organisation.xml",
      cache_url: null,
      webstore_url: null,
      cache_last_updated: null,
      package_id: "e270697a-2baa-4f83-80aa-673cb6
        3d4f32",
      mimetype_inner: null,
      webstore_last_updated: null,
      last_modified: "2012-01-27T00:47:33.973496",
      position: 0,
      size: "2589",
      id: "c7391b0b-0b17-4084-8ce3-23a329008b15",
      resource_type: null,
      name: null
    }
  ],
  tags: [],
```

```
"aa"
 ],
 name: "aa-organisation",
 isopen: true,
 notes_rendered: "",
 url: null,
  ckan_url: "http://iatiregistry.org/dataset/
    aa-organisation",
 notes: "",
 title: "AIDS Alliance Organisation File",
 ratings_average: null,
  extras: {
 publisher_iati_id: "21020",
  activity_period-from: "",
  archive_file: "no",
 verified: "no",
 publisher_organization_type: "21",
 language: "en",
  country: "",
 filetype: "organisation",
 record_updated: "2011-10-12",
 publisher_country: "GB",
 activity_period-to: "",
 data_updated: "2011-09-26 13:40",
 publishertype: "primary_source"
},
ratings_count: 0,
revision_id: "501cbf44-b4e8-454f-9287-
 b2abc47874a4"
```

B. USER'S NEEDS

Below the full list of user's needs can be found, which is put together by representatives from the aid field and originally available at http://lopad.org/topaidquestions. The items marked in **bold** are picked as user's needs for this thesis:

- 1. In total, how much does a given country receive in aid
- 2. In a given country, what is the breakdown of the sources of aid received (including direct transfers from expats).
- 3. In a given country, what is the breakdown of aid received by sector.
- 4. What are the different amounts of foreign money coming into a given country through different channels (e.g. on budget, off-budget third sector, remittances and also via multilats and cross departmental funds??)
 - (a) What amount of donor funding is tied?
 - (b) What % of donor spend is in the donors own county and of that what ratio is TA/procurment and in country programmes?
- 5. In a given country has government spending reduced or increased in sectors that have received foreign aid, and if so by how much. have any reductions in spending been allocated to alternative sectors?
- In a given country, where do donor agencies focus their activities.
- 7. Where have donor agencies committed to focusing their acvtivities, and how does this relate to actual spending patterns

- 8. What is the future commitment to a given country by sector and by donor has a commitment for predictible flows of aid over coming 3/5 years been made?
- All of the above could be applied to regional alongside country analysis
- 10. In country x, how much of the funding goes to local organisations?
- 11. A comparative index of aid vs something like the Human Development Index (both for past spending and for commitments)
- 12. How much money is deducted at each level for adminstration from the total amount originally disbursed and how much of the original amount remains once it reaches the beneficiaries?
- How much aid is coming from philanthropic foundations
- 14. What conditionalities are attached to the aid?
- 15. For humanitarian emergencies: how much per affected person? Does this differ geographically and/or between disasters and complex emergencies?
- 16. How does money from one donor pass through intermediaries? (see http://www.avert.org/pepfar-funding.htm for an example)
- 17. Which service (in the case of health) or tangible outputs (such as schools or roads) result from which donors funds?
- 18. What are the details of the overhead costs! How much money is spend on salaries (in comparison with salaries for equivalent positions in donor countries and in recipient countries?
- 19. How much money is spend on conferences, per diems (or sitting fees), on consultancies and on research?
- 20. What procedures are in place to track the impact of such conferences, consultancies and research?
- 21. What are the mechanisms for information sharing among donors - to what degree do donors collaborate in different sectors?
- 22. What are the qualifications of experts and advisors sent to projects?
- 23. How many people are directly employed in aid activities and what proportion of these are from the recipient country or region?
- 24. What proportion of aid money is spent at the various levels, donor country office, regional offices, country offices, local partners? Most importantly, what percentage of aid money actually makes it to the grassroots?
- 25. What is the exact geographic location of a project? How much aid went to a given province, constituency or village?
- 26. What are the specific dates that commitments and disbursements were made on?
- 27. How much aid is coming from non-DAC donors?
- 28. How much aid has been committed/disbursed in the past month?
- 29. To what degree can we predict trends in aid from known past aid? (That is, how and how much do aid flows exhibit "inertia"?)

- 30. How much donor funding is awarded to engineering firms for infrastructure/engineering projects? And which firms? And for comparison, how much donor funding is awarded to NGOs for infrastructure/engineering projects?
- 31. What proportion of total aid funding is spent on infrastructure? How does that compare over time? What is the infrastructure by type (roads, electricity, water, sanitation, etc)
- 32. Which do nors require the technical research and knowledge they fund in NGOs to be published under open licenses? Similarly technical assistance and research.
- 33. How was a contract decided? On what basis?
- 34. What are donors planning to do in the coming year? How can I bid for one of those contracts?
- 35. Is the aid spent in places where the need is highest? Is it well distributed across the country?
- 36. Does the aid reflect the government's own priorities, or has it been pushed on them by donors?
- 37. In what ways does multilateral aid differ from bilaterally allocated aid?
- 38. How do commercial actors influence aid?
- 39. To what extent do donor governments collaborate in aid projects? To what extent do they compete?
- 40. Which aid-allocating actor is most efficient? Which is most effective?
- 41. Do we see structural differences in the rate of success between large and small development projects?
- 42. To what extent do local NGOs collaborate in aid recipient countries?
- 43. How does violent conflict in recipient countries affect aid activities?
- 44. To what extent do technical assistance projects actually transfer technical knowledge and skills?
- 45. What are the long-term effects of food aid on the agricultural sectors of recipient countries?
- 46. What type of aid facilitates peacemaking? What type does not?
- 47. What are the costs and benefits of employing local staff versus international staff in development projects?
- 48. How do political institutions in recipient countries affect project outcomes?
- 49. What conditions determine whether budget support is effective?
- 50. Which sectors of the economy are most prone to corruption in development projects?
- 51. What is the ideal scale for various types of development assistance?
- 52. How do private-public collaborations affect project outcome?
- 53. What accountability and transparency practices are required from civil society contractors do these match what is expected from government departments where aid money is used. And linked to this who gets to read the m&e reports that are prepared direct beneficiaries and the public at large should know how much is being 'spent' on them and what is the actual impact of aid.

- 54. Why is it only ODA eligible aid that is subject to transparency... how much non ODA eligible aid is going where?
- 55. Can we attribute sub-national breakdowns for aid so we can see how much goes to different parts of recipient countries?

C. MAPPING EVALUATIONS

For each of the linked datasets, we have specified the exact number of matches and the countries that could not be matched below.

C.1 DBPedia

found: 249, not found: 1.

DBPedia, could not automatically find: hm: HEARD ISLAND AND MCDONALD ISLANDS

C.2 GeoNames countries

found: 249, not found: 1.

Could not automatically find: AN NETHERLAND ANTILLES

C.3 CIA Factbook

found: 240, not found: 10.

Could not automatically find:

bg: BONAIRE, SAINT EUSTATIUS AND SABA

cr: COSTA RICA

cw: CURACAO

mp: NORTHERN MARIANA ISLANDS

bl: SAINT BARTHELEMY

mf: SAINT MARTIN (FRENCH PART)

sx: SINT MAARTEN (DUTCH PART)

so: SOMALIA

ss: SOUTH SUDAN

um: UNITED STATES MINOR OUTLYING ISLANDS

C.4 World Bank and Eurostat

found: 212, not found: 38.

Could not automatically find:

AX: ALAND ISLANDS

AI: ANGUILLA

AQ: ANTARCTICA

BQ: BONAIRE, SAINT EUSTATIUS AND SABA

BV: BOUVET ISLAND

IO: BRITISH INDIAN OCEAN TERRITORY

CX: CHRISTMAS ISLAND

CC: COCOS (KEELING) ISLANDS

CK: COOK ISLANDS

FK: FALKLAND ISLANDS (MALVINAS)

GF: FRENCH GUIANA

TF: FRENCH SOUTHERN TERRITORIES

GI: GIBRALTAR

GP: GUADELOUPE

GG: GUERNSEY

HM: HEARD ISLAND AND MCDONALD ISLANDS

VA: HOLY SEE (VATICAN CITY STATE)

JE: JERSEY

MQ: MARTINIQUE Vatican_City YT: MAYOTTE Vietnam MS: MONTSERRAT Wallis_and_Futuna NR: NAURU C.6 ECB AN: NETHERLAND ANTILLES NU: NIUE found: 205, not found: 44. NF: NORFOLK ISLAND PN: PITCAIRN Could not automatically find ECB: RE: REUNION British_Antarctic_Territory BL: SAINT BARTHELEMY Saint_Barth%C3%A9lemy SH: SAINT HELENA, ASCENSION AND TRISTAN DA CUNHA Brunei PM: SAINT PIERRE AND MIQUELON Kingdom_of_the_Netherlands GS: SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS C%C3%B4te_d'Ivoire SJ: SVALBARD AND JAN MAYEN Cura%C3%A7ao TW: TAIWAN, PROVINCE OF CHINA Christmas_Island TK: TOKELAU Falkland_Islands UM: UNITED STATES MINOR OUTLYING ISLANDS Faroe_Islands VG: VIRGIN ISLANDS, BRITISH Guernsey WF: WALLIS AND FUTUNA Hong_Kong EH: WESTERN SAHARA Republic_of_Ireland Isle_of_Man C.5 OECD Iran Jersey found: 208, not found: 41. Moh%C3%A9li North_Korea Could not automatically find OECD: South_Korea British_Antarctic_Territory Laos Saint_Barth%C3%A9lemy Monaco Brunei Moldova Kingdom_of_the_Netherlands Montenegro C%C3%B4te_d'Ivoire Collectivity_of_Saint_Martin Cura%C3%A7ao Republic_of_Macedonia Christmas_Island Macau Falkland_Islands Puerto_Rico Guernsey Gaza_Strip Hong_Kong Serbia Republic_of_Ireland Russia Isle_of_Man Svalbard Iran Slovakia Jersey Northland_State Moh%C3%A9li South_Sudan North_Korea Sint_Maarten South_Korea Svria Laos Kerguelen_Islands Monaco Taiwan Moldova Tanzania Montenegro Buganda Collectivity_of_Saint_Martin Vatican_City Republic_of_Macedonia Venezuela Macau United_States_Virgin_Islands Puerto_Rico Vietnam Gaza_Strip Wallis_and_Futuna Serbia Russia C.7 BFS Svalbard Slovakia found: 201, not found: 48. Northland_State

South_Sudan

Syria

Taiwan

Tanzania

Buganda

Sint_Maarten

Kerguelen_Islands

Could not automatically find BFS: British_Antarctic_Territory Saint_Barth%C3%A9lemy Brunei ${\tt Kingdom_of_the_Netherlands}$ Democratic_Republic_of_the_Congo Republic_of_the_Congo

C%C3%B4te_d'Ivoire South_Georgia_and_the_South_Sandwich_Islands Cura%C3%A7ao Hong_Kong Christmas_Island Republic_of_Ireland Falkland_Islands Isle_of_Man Federated_States_of_Micronesia British_Indian_Ocean_Territory Guernsey Hong_Kong Jersey Republic_of_Ireland Moh%C3%A9li Isle_of_Man North_Korea British_Indian_Ocean_Territory South_Korea IranLaos Jersey Monaco Moh%C3%A9li Moldova North_Korea Montenegro Collectivity_of_Saint_Martin South_Korea Republic_of_Macedonia Laos Monaco Macau Northern_Mariana_Islands Moldova Norfolk_Island Montenegro Collectivity_of_Saint_Martin Pitcairn_Islands Republic_of_Macedonia Puerto_Rico Macau Gaza_Strip Northern_Mariana_Islands Serbia Pitcairn_Islands Russia Puerto_Rico Saint Helena Gaza_Strip Svalbard Serbia Slovakia Russia Northland_State Svalbard South_Sudan Slovakia Sint_Maarten Northland_State Syria South_Sudan Kerguelen_Islands Sint_Maarten Taiwan Syria Tanzania Kerguelen_Islands Buganda Taiwan United_States_Minor_Outlying_Islands Tanzania United_States Vatican_City Buganda Vatican_City Venezuela United_States_Virgin_Islands Vietnam Wallis_and_Futuna Vietnam Wallis_and_Futuna Mayotte C.8 FAO **Transparency International** found: 191, not found: 58. found: 182, not found: 68. Could not automatically find FAO: Could not automatically find: British_Antarctic_Territory AX: Aland Islands Aruba AS: American Samoa Saint_Barth%C3%A9lemy AD: Andorra Brunei AI: Anguilla Bolivia AQ: Antarctica Kingdom_of_the_Netherlands AG: Antigua And Barbuda Bouvet_Island AW: Aruba Cocos_(Keeling)_Islands BZ: Belize C%C3%B4te_d'Ivoire BM: Bermuda Cura%C3%A7ao BQ: Bonaire, Saint Eustatius And Saba Christmas_Island BV: Bouvet Island IO: British Indian Ocean Territory Western_Sahara Falkland_Islands KY: Cayman Islands

CX: Christmas Island

CK: Cook Islands

CC: Cocos (Keeling) Islands

Federated_States_of_Micronesia

Guernsey

Greenland

- CW: Curacao
- FK: Falkland Islands (Malvinas)
- FO: Faroe Islands
- FJ: Fiji
- GF: French Guiana
- PF: French Polynesia
- TF: French Southern Territories
- GI: Gibraltar
- GL: Greenland
- GD: Grenada
- GP: Guadeloupe
- GU: Guam
- GG: Guernsey
- HM: Heard Island And Mcdonald Islands
- VA: Holy See (Vatican City State)
- IM: Isle Of Man
- JE: Jersey
- LI: Liechtenstein
- MH: Marshall Islands
- MQ: Martinique
- YT: Mayotte
- FM: Micronesia, Federated States Of
- MC: Monaco
- MS: Montserrat
- NR: Nauru
- AN: Netherland Antilles
- NC: New Caledonia
- NU: Niue
- NF: Norfolk Island
- MP: Northern Mariana Islands
- PW: Palau
- PS: Palestinian Territory, Occupied
- PN: Pitcairn
- RE: Reunion
- BL: Saint Barthelemy
- SH: Saint Helena, Ascension And Tristan Da Cunha
- KN: Saint Kitts And Nevis
- MF: Saint Martin (French Part)
- PM: Saint Pierre And Miquelon
- SM: San Marino
- SX: Sint Maarten (Dutch Part)
- GS: South Georgia And The South Sandwich Islands
- SS: South Sudan
- SJ: Svalbard And Jan Mayen
- TK: Tokelau
- TC: Turks And Caicos Islands
- TV: Tuvalu
- UM: United States Minor Outlying Islands
- VG: Virgin Islands, British
- VI: Virgin Islands, U.S.
- WF: Wallis And Futuna
- EH: Western Sahara