National Aids Spending Assessments

ASAP Regional Training on Strategic and Operational Planning in HIV & AIDS
1 October 2008
Budapest, Hungary

Carlos Avila
Financing and Economics Division
UNAIDS
How do the Tools Fit?

- Surveillance Data
- Census/UN Pop Division Estimates
- UNAIDS model epidemic patterns
- AIDS Accounts
- Costing and coverage data
- Existing effectiveness data

What is the prevalence of HIV/AIDS?
- EPP/Workbook Method

What is the impact of HIV/AIDS?
- Spectrum

How much is being spent?
- NASA

What resources are required?
- Resource Needs Model

How should we allocate resources?
- Goals
English: National AIDS spending assessment (NASA)

Spanish: Medición de Gasto en SIDA (MEGAS)

French: Évaluation des Flux de Ressources et des Dépenses nationales contre le Sida (EF-REDES)
National AIDS Spending Assessments

- Based on the National Health Accounts framework
  - Consistency across several variables; NHA-HIV/AIDS sub accounts
  - Use of financial tracking, accounting and costing principles
  - Boundaries and functions (health/non-health)
“The functions are no longer limited to health expenditures, following the framework of the NHA, but emphasize the tracking of social mitigation, education, labour, justice and other sectors for an expanded response to HIV/AIDS”
To describe the financial flows for HIV and AIDS
- who pays (sources)?
- who manages the funds (financing agents)
- who provides the services (providers)?
- what was provided (functions: prevention, care, Tx, social mitigation, other sector activities)?
- which are the components (Objects of expenditure)?
- who benefits (beneficiaries)?
T account

All the revenues in one side and all the expenditures on the other side, produce a balance and reduce error.

Information systems and bookkeeping on expenditures.

Proof of purchase, bills, charges, debits, invoices, statements.
Triangulation

Gathering, compiling and cross checking information from three sources

Three party transactions
Characteristics of NASA

- **Comprehensive**: An inventory of all resources addressed to HIV/AIDS
- **Internally consistent**: Totals must add-up and be congruent across different variable dimensions and tables.
- **Internationally comparable accounts**: The breakdown of tables, the content of categories and the methods of calculation must be harmonized (e.g. use of compatible classifications)
- **Compatible with upper-level or aggregated systems**
  - NHA and SNA. Systems developed during the last 30 years. Mainly OECD based. Producers guide for NHA: WHO
NASA Dimensions and vectors

To describe the AIDS health and non-health financial flows and expenditures according to THREE Dimensions and six vectors:

FINANCING:
   1) Sources; 2) Agents

PROVISION:
   3) Providers; 4) Production Factors

USE:
   5) Functions; 6) Beneficiaries
Flux de financement

**SOURCES**

- Public
- ONG Internation
- Bilatéral
- Multilatéral
- Privée

**Agents Financiers**

- Ministere de la Sante
- Autres ministères
- CNLS
- ANCS
- ONG Internationales
- Coopération bilatérale
- Système des Nations Unit et autres multilatéraux

**Prestataires**

- Hôpitaux
- CTA
- Des autres ministères
- ONG/OCB
- Cabinets médicaux
- Hôpitaux privés
- Laboratoire privée
- Pharmacies
- Medicine Traditionnelle
Transactions

- **Sources** (Public, Private, International)
  - Financing Agents (to decide the use of the funds)
- **Providers** of services and goods
  - (e.g. hospitals, ambulatory services, pharmacies, NAP, MoH, other Ministries, etc.)
- **Functions**: (Health, Health Related, Non-health)
- **Target Groups** (or beneficiaries; vulnerable and at-risk epidemiologically defined populations): MSM, CSW, IDU; Accessible groups: military, school children; Recipients of treatment: PLWH, PLWA
- **Object of Expenditure** (budgetary items): salary of health personnel, non-health personnel, material and equipment, administration, etc.)
Transactions

Resource Tracking
“Top down” & “Bottom up”
Flow of resources from origin to users: reconstruction of transactions ("Top Down")
Categories of Spending

1. Prevention
2. Treatment and care
3. Orphan and vulnerable children
4. Programme management
5. Human resources for AIDS
6. Social protection
7. Enabling environment & community development
8. Research: AIDS related
Reconstruction of transactions ("Bottom Up") to reconcile with flows from sources (ceiling)
Results and cross-tabulation system

• This methodology is based on double entry tables – matrices -
  – Represent the origin and the destination of resources
  – Help to avoid doubling counting of expenditures.

• A NASA report typically includes matrices, summary tables, auxiliary tables and synthetic indicators to facilitate the situation analysis and exposition to selected audiences.
The agents’ triangulation in NASA

Indicator No. 1 – Funding Matrix
Reconstructing Transactions - NASA

Financial Flow

F. Source → F. Agent → Provider

Activities or ASC

PF₁ → ASC₁ → ASC₂ → ASC₃ → PF₃

BP₁ → ASC₂ → Bp₃

Production Factors₂ → Beneficiary Populations₂

Consumption Flow

Source → Agent. → Provider
NASA Matrixes

- FS x ASC  Financing Sources by AIDS Spending Categories (UNGAS Funding Matrix)
- FS x FA   Financing Sources by Financing Agents
- FA x ASC  Financing Agents by AIDS Spending Category
- PS x ASC  Providers by AIDS Spending Categories
- FA x PS   Financing Agents by Providers
- PS x PF   Providers by Production Factors
- ASC x BP  AIDS Spending Categories by Beneficiary Populations
- ASC x PF  AIDS Spending Categories by Production Factors

Other tables may be constructed if there are specific needs by policymakers and if data are available.
### NASA Matrixes

#### Vertically: Destination of the resources / Total Resources allocated to each ASC’s

<table>
<thead>
<tr>
<th>ASC categories</th>
<th>FS.1 Public Funds</th>
<th>FS.2 Private Funds</th>
<th>FS.3 International Funds</th>
<th>Total general</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASC.1 PREVENTION</td>
<td>9,312,328</td>
<td>10,941,499</td>
<td>42,760,018</td>
<td>63,013,845</td>
</tr>
<tr>
<td>ASC.2 CARE AND TREATMENT</td>
<td>8,928,228</td>
<td>521,962</td>
<td>26,347,229</td>
<td>35,797,419</td>
</tr>
<tr>
<td>ASC.3 ORPHANS AND VULNERABLE CHILDREN (OVC)</td>
<td>1,140,077</td>
<td>293,988</td>
<td>5,922,478</td>
<td>7,356,543</td>
</tr>
<tr>
<td>ASC.4 PROGRAMME Management and administration strengthening</td>
<td>4,495,006</td>
<td>2,706,650</td>
<td>4,117,491</td>
<td>11,319,147</td>
</tr>
<tr>
<td>ASC.5 HUMAN RESOURCES’ RECRUITMENT AND RETENTION INCENTIVES - HUMAN CAPITAL</td>
<td>1,793,126</td>
<td>59,556</td>
<td>2,301,396</td>
<td>4,154,088</td>
</tr>
<tr>
<td>ASC.6 SOCIAL PROTECTION AND SOCIAL SERVICES (EXCLUDING OVC)</td>
<td>392,026</td>
<td>15,296</td>
<td>1,607</td>
<td>408,929</td>
</tr>
<tr>
<td>ASC.7 ENABLING ENVIRONMENT AND COMMUNITY DEVELOPMENT</td>
<td>451,362</td>
<td>245,716</td>
<td>559,417</td>
<td>1,256,495</td>
</tr>
<tr>
<td>ASC.8 HIV AND AIDS-RELATED RESEARCH (EXCLUDING OPERATIONS RESEARCH)</td>
<td>12,485</td>
<td>n/a</td>
<td>21,059</td>
<td>33,544</td>
</tr>
<tr>
<td>Total general</td>
<td>26,524,638</td>
<td>14,784,667</td>
<td>82,030,695</td>
<td>123,340,000</td>
</tr>
</tbody>
</table>

#### Horizontally: Who is financing the HIV response?

- **Total Expenditure**
Standardization of concepts

- Robust inter-temporal comparisons to track resource availability
- Ensure valid comparisons across countries
- Standard definitions, boundaries and classifications

Standardization on estimation methods

- Comparable methods in estimating specific items of expenditure
- Hospital treatment and household OOPS require some amount of estimation and imputation in most contexts
UNGASS Indicator 1


- Pages 23 and 93 to 96.

NASA Classifications taxonomy and definitions

Role of Financial Monitoring in National AIDS Monitoring and Evaluation – Experience from Eastern Europe and Central Asia
Data includes:

- International donors, domestic spending (including public spending and out-of-pocket expenditures)
- International Foundations and GF included from 2003 onwards, PEPFAR included from 2004 onwards

Estimated total annual resources available for AIDS
1996 – 2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated Resources (US Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>292</td>
</tr>
<tr>
<td>1997</td>
<td>485</td>
</tr>
<tr>
<td>1998</td>
<td>479</td>
</tr>
<tr>
<td>1999</td>
<td>893</td>
</tr>
<tr>
<td>2000</td>
<td>1,359</td>
</tr>
<tr>
<td>2001</td>
<td>1,623</td>
</tr>
<tr>
<td>2002</td>
<td>6,079</td>
</tr>
<tr>
<td>2003</td>
<td>8,297</td>
</tr>
</tbody>
</table>
Why HIV/AIDS M&E?

“Raise it, spend it, prove it”

Richard Feachem, frm. Executive Director 
Global Fund to Fight AIDS, TB and Malaria
Why M&E of HIV/AIDS?

Increasing demand for effective M&E of the epidemic and the response due to:

- Rapid expansion of new resources available to respond to the epidemic (GFATM, PEPFAR, WB, public funding, etc.)
- Rapid scale-up of treatment and prevention programs (3x5, Universal Access)
- Global push for improved coordination among donors and among donors and national HIV/AIDS programs – focus on strengthening national capacities
Components of a National M&E System

- Biological and behavioral HIV/AIDS surveillance
- Essential research on HIV/AIDS prevention, treatment and care
- Program activity monitoring and program evaluation
- Financial monitoring, resource needs estimates
Available at:

www.unaids.org

Knowledge centre

HIV data
Annex 2 starts on Page 236.


Page 252 – table with actual numbers.
Indicator 1.
Domestic and International AIDS Spending
UNGASS Reporting 2008
Financial M&E to monitor program implementation and effectiveness

Allows answering questions addressing:

• **Spending Patterns**
  - What are key funding sources (public, private, non-for-profit organizations, donors, etc.) – proportional spending
  - How does national level spending compare to spending at the sub-national level?
FIGURE G

Bilateral and multilateral disbursements to HIV-related programmes in 2006

Bilateral and multilateral disbursements to HIV-related programmes in 2006 (US$ Billions)

Total resources available: US$8.9 Billion

### Top Spenders and Financing Sources, low- and middle income countries, 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>Total reported Domestic Public and International Expenditure (Million US$)</th>
<th>Domestic Public</th>
<th>Bilaterals</th>
<th>Global Fund</th>
<th>UN and all other Multilaterals</th>
<th>All other international sources or not specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>$575.68</td>
<td>74.00%</td>
<td>7.10%</td>
<td>14.00%</td>
<td>3.40%</td>
<td>1.50%</td>
</tr>
<tr>
<td>Brazil</td>
<td>$565.19</td>
<td>99.50%</td>
<td>0.10%</td>
<td>0.00%</td>
<td>0.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>$323.50</td>
<td>NA/NR</td>
<td>NA/NR</td>
<td>NA/NR</td>
<td>NA/NR</td>
<td>NA/NR</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>$304.84</td>
<td>83.40%</td>
<td>0.00%</td>
<td>11.60%</td>
<td>0.30%</td>
<td>4.70%</td>
</tr>
<tr>
<td>Zambia</td>
<td>$189.93</td>
<td>15.30%</td>
<td>60.90%</td>
<td>12.90%</td>
<td>7.00%</td>
<td>3.90%</td>
</tr>
<tr>
<td>Argentina</td>
<td>$149.53</td>
<td>96.70%</td>
<td>0.10%</td>
<td>2.90%</td>
<td>0.20%</td>
<td>0.20%</td>
</tr>
<tr>
<td>Botswana</td>
<td>$143.41</td>
<td>91.30%</td>
<td>8.10%</td>
<td>0.30%</td>
<td>NA/NR</td>
<td>0.40%</td>
</tr>
<tr>
<td>China</td>
<td>$138.93</td>
<td>77.10%</td>
<td>4.60%</td>
<td>17.50%</td>
<td>0.80%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>$129.52</td>
<td>49.00%</td>
<td>32.40%</td>
<td>0.00%</td>
<td>18.60%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Colombia</td>
<td>$97.65</td>
<td>98.91%</td>
<td>0.00%</td>
<td>0.92%</td>
<td>0.14%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>$95.51</td>
<td>15.00%</td>
<td>46.80%</td>
<td>0.70%</td>
<td>31.40%</td>
<td>6.20%</td>
</tr>
<tr>
<td>Haiti</td>
<td>$70.28</td>
<td>0.60%</td>
<td>67.30%</td>
<td>24.00%</td>
<td>6.50%</td>
<td>1.55%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$56.58</td>
<td>26.60%</td>
<td>47.70%</td>
<td>18.50%</td>
<td>7.20%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
Annual Domestic Spending: top 20 countries (US$ 2.73 Billion). UNGASS reports, latest data available (US$ Million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Domestic public expenditure per capita (US$)</th>
<th>Domestic public expenditure (US$ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil*</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>South Africa</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Mexico</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Thailand</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Argentina</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Botswana</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>China</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>UR Tanzania</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Australia</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Colombia</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Japan</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Turkey</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Chile</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Poland</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Angola</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Cuba</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Iran</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Ukraine</td>
<td>200</td>
<td>250</td>
</tr>
</tbody>
</table>

*Partial data
## HIV Expenditures by Finance Sources and Income level

(latest data available 2005/2007)

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Per Capita (US$)</th>
<th>International</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>$3.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower middle income</td>
<td>$0.26</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Upper middle income</td>
<td>$2.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High income: non-OECD</td>
<td>$8.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** International and Public expenditures given as percentages for each income level.
Distribution of HIV Spending according to Spending category and Type of epidemic, 2006

Source: 8 Low-level epidemic, 8 Concentrated level epidemic and 8 Generalized epidemic countries included
Spending in programs specifically directed to the populations most at risk for HIV as a percentage of total prevention spending by type of epidemic – Public and International Funds, 2006

<table>
<thead>
<tr>
<th>Type of Epidemic</th>
<th>Harm reduction programs and IDUs</th>
<th>Programs for men having sex with men</th>
<th>Programs for sex workers and their clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>8.6%</td>
<td>8.0%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Concentrated</td>
<td>2.8%</td>
<td>3.3%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Generalized</td>
<td>4.7%</td>
<td>1.8%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

- Low Concentrated Generalized
- Harm reduction programs and IDUs
- Programs for men having sex with men
- Programs for sex workers and their clients
Distribution of financing sources for the purchase of ARV in low- and middle-income countries, 2006

Source: 14 low income, 15 lower middle income and 11 upper middle income countries included
Estimated total annual resources available for HIV, 2000-2007, and projected financial resources required by 2010 if current scale up continues (US$ billion)
Financial Resource Tracking in Eastern Europe and Central Asia
Trends in domestic and international AIDS funding, 10 CIS countries

Millions

2001 2002 2003 2004 2005 2006

Domestic Public Expenditures  International Financing
### Financial Resource Tracking in Eastern Europe and Central Asia

<table>
<thead>
<tr>
<th>ASC</th>
<th>PublicDom</th>
<th>Int’l</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prevention</td>
<td>63,265,613</td>
<td>61,523,222</td>
<td>124,788,835</td>
</tr>
<tr>
<td>2. Care and Treatment</td>
<td>168,641,188</td>
<td>28,172,543</td>
<td>196,813,731</td>
</tr>
<tr>
<td>3. Orphans and Vulnerable Children</td>
<td>32,739,603</td>
<td>912,284</td>
<td>33,651,888</td>
</tr>
<tr>
<td>4. Program Management and Administration Strengthening</td>
<td>28,541,443</td>
<td>18,257,703</td>
<td>46,799,145</td>
</tr>
<tr>
<td>5. Incentives for Human Resources</td>
<td>20,141,123</td>
<td>4,531,612</td>
<td>24,672,735</td>
</tr>
<tr>
<td>6. Social Protection and Social Services excluding Orphans and Vulnerable Children</td>
<td>12,636,044</td>
<td>1,442,440</td>
<td>14,078,484</td>
</tr>
<tr>
<td>7. Enabling Environment and Community Development</td>
<td>529,900</td>
<td>7,117,457</td>
<td>7,647,357</td>
</tr>
<tr>
<td>8. Research excluding operations research</td>
<td>592,710</td>
<td>1,617,621</td>
<td>2,210,332</td>
</tr>
<tr>
<td>Others not specified elsewhere</td>
<td>68,626,564</td>
<td>247,241</td>
<td>68,873,804</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>395,714,187</strong></td>
<td><strong>123,822,124</strong></td>
<td><strong>519,536,311</strong></td>
</tr>
</tbody>
</table>

**Footer:**

[UNAIDS Logo]
Analysis of Financing Sources

Public Domestic and International Spending in EECA
14 countries, latest available data

[Chart showing percentage of international and public sub-total spending in USD for various countries, with a legend indicating "International_Sub_TotalUSD" and "Public_Sub_TotalUSD".]
EECA Countries* - Reported HIV Spending by Intervention

IDU, Needs and Expenditures in EECA*, 2006 and 2007


UNAIDS
Use of NASA results

• Support in-country policy and decision making process, specifically for AIDS
• Provide indicators on the financing of AIDS
  – Annual estimates of Financing Sources and Functions
    • Comparison: resources available (PAST) and (FUTURE) resource needs
  – Monitoring of Declaration of Commitment (e.g. UNGASS)
• International Comparability
• Utilization of data for country defined purposes by AIDS program managers/policy and decision makers