TECHNICAL NOTES

for preparing the 2017 African Agriculture Transformation Scorecard on implementing Commitments of the June 2014 AU Heads of State Malabo Declaration

The 2017 Progress Report on African Agricultural Transformation for implementing the Malabo Declaration is due at the January 2018 AU Assembly of Heads of State and Government

Draft March 2017, Reviewed July 2017

Introduction

The African Union (AU) Commission is preparing the 1st Report on the implementation of the June 2014 AU Assembly Declaration on the Malabo Commitments for agricultural transformation in Africa; a report which is due for the January 2018 AU Assembly.

The Report is currently being prepared and will be a compilation of data expected from the 55 AU Member States that are being trained to carry out self-assessments and provide their individual progress report for achieving each target set in the Malabo Declaration.

Member states are preparing their report using the *Country Reporting Template* and *Technical Guidelines* that are developed in line with the 7 performance themes of the Malabo Declaration, where 23 performance categories and 43 indicators have been prioritized to be tracked and reported on by member states for the 2017 reporting round.

The seven (7) performances themes of the Malabo Declaration include:

Theme 1- Commitment to CAADP process

Theme 2- Investment finance in Agriculture

Theme 3- Ending Hunger

Theme 4- Eradicating Poverty through Agriculture

Theme 5- Intra-African Trade in Agriculture commodities

Theme 6- Resilience to Climate Variability

Theme7- Mutual Accountability for Actions and Results

Agreement reached by the leadership of the AU Commission is to evaluate the progress made by individual member state in the form of *Balanced Scorecard* and to come up with the *African Agricultural Transformation Scorecard*, using appropriate methods to benchmark country performance in achieving targets set in the Malabo Declaration.

Benchmarking methods are metric methods that bring accuracy, rightness and fairness in evaluating progress for achieving a specific goal for which smart targets and corresponding indicators have been designed and agreed upon. The methods can help to get a *Balanced Scorecard that enables* peer-to-peer metric comparison of performances in order to stimulate continuous improvement of interventions towards the common agreed targets. In this case, the clarity of the benchmarking model seeks mainly to allow Member States to see how their performance is measured, and to search for best practices in order to overcome identified challenges, while reinforcing the culture of continuous improvement and providing sense of urgency in achieving agriculture Sector goals for Africa.

These **2017 Technical Notes**, while recalling methods used in the *AU's Malabo Biennial Review Technical Guidelines* to calculate each performance indicator, provide as well further details on the methods used to calculate the Performance Indices and reference points for performance measurement that permit to set a right score in the *Balanced Scorecard*, accordingly with the agreed weighting systems.

In line with the performance structure set for the Biennial review exercise, the models in this document, provide: the ***I-score*** which is the score attributed to the performance Indicator; the ***C-score*** which is the combined score of the performance Category*; the* ***T-score*** which is the combined score of the performance Theme; *and the* ***O-score*** which is the Overall score in achieving the Malabo declaration. The milestone and the Benchmark as appeared in the document, are respectively the current values (minimum) of the indicator and the score, for the country to be on track for achieving the target set for the target year.

These Technical Notes will serve as basis for the design of the database for country data compilation to generate the 2017 Malabo Scorecard.

ADOPTED WEGHTING SYSTEM

for designing the balanced African Agricultural Transformation Scorecard: *The Performance Structure.*

Weighting Systems for designing the Balanced Scorecards on progress made for implementing the June 2014 Malabo Declaration on Agriculture transformation in Africa

Performance Theme			Performance Category			Performance Indicators		
No.	*Item*	*T-weight*	*No.*	*Item*	*C-weight*	*No.*	*Item*	*I-weight*
1	**Commitment to CAADP Process**	*14.3%*	PC 1.1	Country CAADP Process	*4.8%*	1.1	CAADP Process Completion Index (CAADPPro)	*4.8%*
			PC 1.2	CAADP based Cooperation, Partnership & Alliance	*4.8%*	1.2	Existence of, and Quality of multi-sectorial and multi-stakeholder coordination body (Qc)	*4.8%*
			PC 1.3	CAADP based Policy & Institutional Review/ Setting/ Support	*4.8%*	1.3	Evidence-based policies, supportive institutions and corresponding human resources (EIP)	*4.8%*
2	**Investment Finance in Agriculture**	*14.3%*	PC 2.1	Public Expenditures to Agriculture	*3.6%*	*2.1i*	Public agriculture expenditure as share of total public expenditure (ţPAE)	*1.2%*
						2.1ii	Public Agriculture Expenditure as % of agriculture value added (PAEAgVA)	*1.2%*
						2.1iii	ODA disbursed to agriculture as % of commitment (ODA)	*1.2%*
			PC 2.2	Domestic Private Sector Investment in Agriculture	*3.6%*	2.2	Ratio of domestic private sector investment to public investment in agriculture (ţDPrPb)	*3.6%*
			PC 2.3	Foreign Private Sector Investment in Agriculture	*3.6%*	2.3	Ratio of foreign private direct investment to public investment in agriculture (ţFPrPb)	*3.6%*
			PC 2.4	Access to finance	*3.6%*	2.4	Proportion of men and women engaged in agriculture with access to financial services (ţAgFs)	*3.6%*
	Ending Hunger	*14.3%*	PC 3.1	Access to Agriculture inputs and technologies	*2.9%*	3.1i	Fertilizer consumption (kilogram of nutrients per hectare of arable land), (Fz)	*0.5%*
						3.1ii	Growth rate of the size of irrigated areas from its value of the year 2000 (RiIA)	*0.5%*
						3.1iii	Growth rate of the ratio of supplied quality agriculture inputs (seed, breed, fingerlings) to the total national inputs requirements for the commodity (ţAgI)	*0.5%*
						3.1iv	Proportion of farmers having access to Agricultural Advisory Services (FAgAS)	*0.5%*
						3.1v	Total Agricultural Research Spending as a share of AgGDP (ţTARS)	*0.5%*
						3.1vi	Proportion of farm households with ownership or secure land rights (ţHhSL)	*0.5%*
			PC 3.2	Agricultural Productivity	*2.9%*	3.2i	Growth rate of agriculture value added, in constant US dollars, per agricultural worker (ţAgW)	*1.0%*
						3.2ii	Growth rate of agriculture value added, in constant US dollar, per hectare of agricultural arable land (ţAgL)	*1.0%*
						3.2iii	Growth rate of yields for the 5 national priority commodities, and possibly for the 11 AU agriculture priority commodities (ţY)	*1.0%*
			PC 3.3	Post-Harvest Loss	*2.9%*	3.3	Reduction rate of Post-Harvest Losses for (at least) the 5 national priority commodities, and possibly for the 11 AU agriculture priority commodities (ţPHL).	*2.9%*
			PC 3.4	Social Protection	*2.9%*	3.4	Budget lines (%) on social protection as percentage of the total resource requirements for coverage of the vulnerable social groups (ţSP)	*2.9%*
			PC 3.5	Food security and Nutrition	*2.9%*	3.5i	Prevalence of stunting (% of children under 5 years old) (St)	*0.5%*
						3.5ii	Prevalence of underweight (% of children under 5 years old) (Uw)	*0.5%*
						3.5iii	Prevalence of wasting (% of children under 5 old) (W).	*0.5%*
						3.5iv	Proportion of the population that is undernourished (% of the country's population) (U)	*0.5%*
						3.5v	Growth rate of the proportion of Minimum Dietary Diversity-Women (ţMDDW)	*0.5%*
						3.5vi	Proportion of 6-23 months old children who meet the Minimum Acceptable Diet (MAD)	*0.5%*

Performance Theme			Performance Category			Performance Indicators		
No.	Item	T-weight	No.	Item	C-weight	No.	Item	I-weight
4	Eradicating Poverty through Agriculture	14.3%	PC 4.1	Agricultural GDP and Poverty Reduction	3.6%	4.1i	Growth rate of the Agriculture Value Added (ţAgGDP) Growth rate of the agriculture value added, in constant US dollars (ţAgVA)	0.7%
						4.1ii	Agriculture contribution to the overall poverty reduction target (Stand-by)	0.7%
						4.1iii	Reduction rate of poverty headcount ratio, at national poverty line (% of population), dpovN	0.7%
						4.1iv	Reduction rate of poverty headcount ratio at international poverty line (% of population), dpovI	0.7%
						4.1v	Reduction rate of the gap between the wholesale price and farmgate price (ţfgws)	0.7%
			PC 4.2	Inclusive PPPs for commodity value chains	3.6%	4.2	Number of priority agricultural commodity value chains for which a PPP is established with strong linkage to smallholder agriculture, (Nc)	3.6%
			PC 4.3	Youth job in agriculture	3.6%	4.3	Percentage of youth that is engaged in new job opportunities in agriculture value chains, (ţYth)	3.6%
			PC 4.4	Women participation in Agri-business	3.6%	4.4	Proportion of rural women that are empowered in agriculture, (ţWE)	3.6%
5	Intra-African Trade in Agriculture Commodities	14.3%	PC 5.1	Intra-African Trade in agriculture commodities and services	7.1%	5.1	Growth rate of the value of trade of agricultural commodities and services within Africa, in constant US dollars (ţIAT)	7.1%
			PC 5.2	Intra-African Trade Policies and institutional conditions	7.1%	5.2i	Trade Facilitation Index (TFI)	3.6%
						5.2ii	Domestic Food Price Volatility Index (CV)	3.6%
6	Resilience to Climate Variability	14.3%	PC 6.1	Resilience to climate related risks	7.1%	6.1i	Percentage of farm, pastoral, and fisher households that are resilient to climate and weather related shocks (ţRAgHh)	3.6%
						6.1ii	Share of agriculture land under sustainable land management practices (SSLM)	3.6%
			PC 6.2	Investment in resilience building	7.1%	6.2	Existence of government budget-lines to respond to spending needs on resilience building initiatives (EI_{RB})	7.1%
7	Mutual Accountability for Actions and Results	14.3%	PC 7.1	Country capacity for evidence based planning, impl. and M&E	4.8%	7.1	Index of capacity to generate and use agriculture statistical data and information (ASCI)	4.8%
			PC 7.2	Peer Review and Mutual Accountability	4.8%	7.2	Existence of inclusive institutionalized mechanisms and platforms for mutual accountability and peer review (ECI)	4.8%
			PC 7.3	Biennial Agriculture Review Process	4.8%	7.3	Country Biennial Report submission (BR)	4.8%
Total		100%			100%			100%
Number		7			23			43

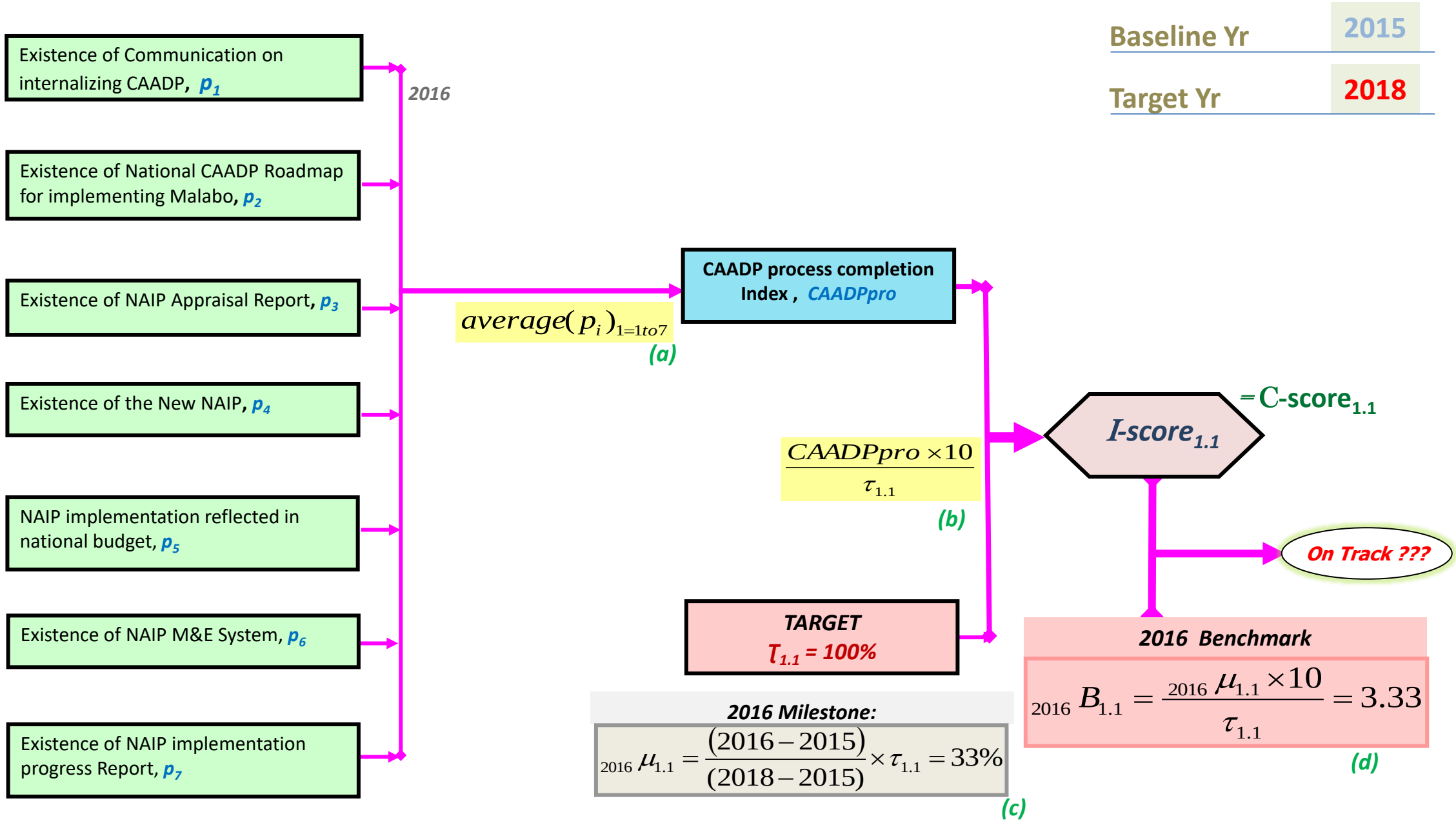
Technical Notes 1

Performance Evaluation for achieving goals under Theme 1 : "COUNTRY COMMITMENT TO CAADP PROCESS"

PC 1.1 | Country CAADP Process

1.1- CAADP process to be fully completed at the country level: Reach 100% of the completion, CAADPpro, by 2018 .

I-score$_{1.1}$ | Estimating progress on completing CAADP Process



PC 1.2 | CAADP based Cooperation, Partnership & Alliance

1.2- Multi-sectorial coordination body and multi-stakeholder body fully established and operational at national level: Reach 100% for the Quality of multi-sectorial and multi-stakeholder coordination body, Qc, by 2018.

I-score$_{1.2}$ | Estimating progress on establishing multi-sectorial coordination body and multi-stakeholder body

- *Existence of the TORs,* p_{TOR1}
- *Reflection of the key elements,* p_{TOR2}
- *Representation of stakeholders,* p_{TOR3}
- Relevance of membership, p_{TOR4}
- *Existence of List of official nominees and affiliation,* p_{TOR5}

$av.(p_{TOR(i)})$ *(e)*

Existence of quality terms of reference, Qc_1 — $W_1 = 10\%$

- *Performance for meetings held,* p_{IPM1}
- *Level of engagement,* p_{IMP2}

$(p_{IMP1} + p_{IMP2})/2$ *(f)*

Level of implementation of the coordination actions , Qc_2 — $W_2 = 25\%$

- *Total number of organizations,* N_{org}
- *Total number of meetings organized,* N_{mO}
- *Number of organizations present at each meetings organized,* N_{orgi}

$\sum(N_{orgi})/(N_{org} \times N_{mO})$ *(g)*

Level of participation and inclusiveness, Qc_3 — $W_3 = 25\%$

- *Total number of recommendations taken during the evaluation period,* N_{RT}
- *Total number of decisions taken with out of the number of recommendations during the evaluation period,* N_{DT}
- *Number of decisions implemented,* N_{DI}

(N_{DI} / N_{RT}) *(h)*

Level of commitment to decisions , Qc_4 — $W_4 = 20\%$

- *Total expected senior attendance per meeting,* T_{SA}
- *Total number of meetings organized,* N_{mO}
- *Observed senior attendance at each meetings organized,* Q_{SAi}

$(\sum Q_{SAi})/(N_{mO} \times T_{SA})$ *(i)*

Level of representation, Qc_5 — $W_5 = 20\%$

2016

$Qc_i(\%)$

$\sum_{i=1}^{5}(Qc_i \times w_i)$ *(j)*

Existence of, and Quality of multi-sectorial and multi-stakeholder coordination body, Qc

$\frac{Qc \times 10}{\tau_{1.2}}$ *(k)*

I-score$_{1.2}$ = C-score$_{1.2}$

On Track ???

TARGET
$T_{1.2} = 100\%$

2016 Milestone:

$$_{2016}\mu_{1.2} = \frac{(2016-2015)}{(2018-2015)} \times \tau_{1.2} = 33\%$$

(l)

2016 Benchmark

$$_{2016}B_{1.2} = \frac{_{2016}\mu_{1.2} \times 10}{\tau_{1.2}} = 3.33$$

(m)

Baseline Yr 2015

Target Yr 2018

PC 1.3 | CAADP based Policy & Institutional Review/ Setting/ Support

1.3- Evidence-based policies and institutions that support planning and implementation are established and implemented by the country to deliver on Malabo: Reach 100% for the Evidence-based policies, supportive institutions and corresponding human resources, EIP, by 2018.

I-score$_{1.3}$ | Estimating progress on establishing evidence based policies and institutions

Baseline Yr 2015

Target Yr 2018

- Total number of policies and strategies in the NAIP, TNP
- Number of policies and strategies that are evidence-based, NEP

$100 \times NEP / TNP$ *(n)*

Evidence-based policies and strategies evidence, *EPE*

2016

- Number of policies and strategies elements in the NAIP that required supportive institutions (laws and regulations), NRI
- Number of institutions (laws and regulations) that exist to support policies and strategies, NIP

$100 \times NIP / NRI$ *(o)*

Supportive institutions -laws and regulations, *EPI*

- Number of required fulltime staff positions for planning and M&E, FTP
- Number of staffing positions filled, FTS

$100 \times FTS / FTP$ *(p)*

Full-time equivalent staff dedicated to agricultural policy planning, implementation and M&E within the Ministry of agriculture, *FTE*

Evidence-based policies, supportive institutions and corresponding human resources , *EIP*

$(EPE + EPI + FTE)/3$ *(q)*

$\frac{EIP \times 10}{\tau_{1.3}}$ *(r)*

TARGET
$T_{1.3}$ = 100%

2016 Milestone:

$$_{2016}\mu_{1.3} = \frac{(2016-2015)}{(2018-2015)} \times \tau_{1.3} = 33\%$$ *(s)*

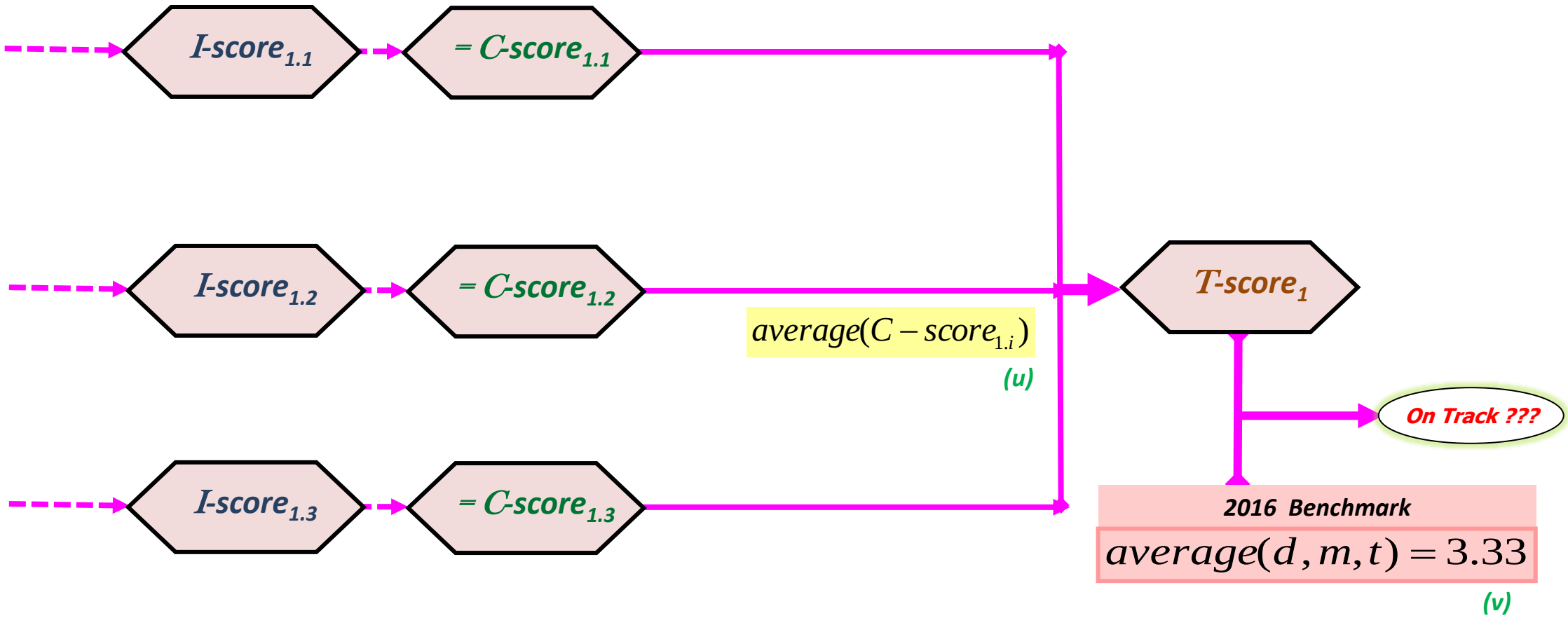
I-score$_{1.3}$ = C-score$_{1.3}$

On Track ???

2016 Benchmark

$$_{2016}B_{1.3} = \frac{_{2016}\mu_{1.3} \times 10}{\tau_{1.3}} = 3.33$$ *(t)*

$T\text{-score}_1$ | Overall progress for Theme 1: "COUNTRY COMMITMENT TO CAADP PROCESS"



Technical Notes 2

Performance Evaluation for achieving goals under Theme 2 : "INVESTMENT FINANCE IN AGRICULTURE"

PC 2.1 | Public Expenditures to Agriculture

2.1i- Increase public expenditures to agriculture as part of national expenditures, to at least 10% , from 2015 to 2025.

2.1ii- Ensure adequate intensity of agricultural spending by keeping annual public agriculture expenditure as % of agriculture value added to no less than (or at a minimum of) 19% from 2015 to 2025.

2.1iii- Ensure that Official Development Assistance (ODA) committed to implement the NAIPs is fully disbursed to countries. The target is to have 100% ODA disbursement annually from 2015 to 2025.

I-score$_{2.1i}$ | Estimating progress on public expenditures in agriculture

Baseline Yr 2015

Target Yr 2025

Total Public Expenditure in local currency unit (lcu), *TPE*

2015

$100 \times PAE / TPE, (\%)$ *(w)*

Public Agriculture Expenditure in local currency units (lcu), *PAE*

Public agriculture expenditure as share of total public expenditure, τPAE_{2015}

$(\tau PAE_{2016} + \tau PAE_{2015}) / 2$ *(y)*

Total Public Expenditure in local currency unit (lcu), *TPE*

2016

$100 \times PAE / TPE, (\%)$ *(x)*

Public Agriculture Expenditure in local currency units (lcu), *PAE*

Public agriculture expenditure as share of total public expenditure, τPAE_{2016}

Average Public agriculture expenditure as share of total public expenditure, τPAE

$$Max\left[Min\left(10 \times \frac{\tau PAE}{\tau_{2.1i}}, 10 \right), 0 \right]$$ *(z)*

TARGET
$\tau_{2.1i}$ = 10%

2016 Milestone:

$$_{2016}\mu_{2.1i} = \tau_{2.1i} = 10\%$$ *(aa)*

I-score$_{2.1i}$

On Track ???

2016 Benchmark

$$_{2016}B_{2.1i} = \frac{_{2016}\mu_{2.1i} \times 10}{\tau_{2.1i}} = 10$$ *(ab)*

I-score$_{2.1ii}$ | Estimating progress on intensity of agricultural spending

Baseline Yr 2015

Target Yr 2025

Public Agriculture Expenditure in local currency units (lcu), ***PAE***

2015

$100 \times PAE / AgGDP$ ***(ac)***

Agriculture Value Added in local currency units (lcu), ***AgGDP***

Public Agriculture expenditure as % of agriculture value added, ***$PAE_{AgGDP \cdot 2015}$***

$(PAE_{AgGDP.2016} + PAE_{AgGDP.2015})/2$ ***(ae)***

Public Agriculture Expenditure in local currency units (lcu), ***PAE***

2016

$100 \times PAE / AgGDP$ ***(ad)***

Agriculture Value Added in local currency units (lcu), ***AgGDP***

Public Agriculture expenditure as % of agriculture value added, ***$PAE_{AgGDP \cdot 2016}$***

Average Public agriculture expenditure as % of agriculture value added, *PAE_{AgGDP}*

$$Max\left[Min\left(10 \times \frac{PAE_{AgGDP}}{\tau_{2.1ii}}, 10\right), 0\right]$$ ***(af)***

TARGET
$\tau_{2.1ii}$ = 19%

2016 Milestone:

$$_{2016}\mu_{2.1ii} = \tau_{2.1ii} = 19\%$$ ***(ag)***

I-score$_{2.1ii}$

On Track ???

2016 Benchmark

$$_{2016}B_{2.1ii} = \frac{_{2016}\mu_{2.1ii} \times 10}{\tau_{2.1ii}} = 10$$ ***(ah)***

I-score$_{2.1iii}$ | Estimating progress on ODA disbursement to agriculture

Official Development Assistance (ODA) for agriculture, livestock, forestry, and fishery, gross disbursements (US$), ***agODAD***

2015

$100 \times agODAD / agODAC$ ***(ai)***

ODA for agriculture, livestock, forestry, and fishery, commitments (US$): ***agODAC***

ODA disbursed to agriculture as % of commitments , ODA_{2015}

$(ODA_{2016} + ODA_{2015}) / 2$ ***(ak)***

Official Development Assistance (ODA) for agriculture, livestock, forestry, and fishery, gross disbursements (US$), ***agODAD***

2016

$100 \times agODAD / agODAC$ ***(aj)***

ODA for agriculture, livestock, forestry, and fishery, commitments (US$): ***agODAC***

ODA disbursed to agriculture as % of commitments , ODA_{2016}

Average ODA disbursed to agriculture as % of commitments, *ODA*

$$Max\left[Min\left(10 \times \frac{ODA}{\tau_{2.1iii}}, 10 \right), 0 \right]$$ ***(al)***

TARGET
$T_{2.1iii}$ = 100%

2016 Milestone:

$$_{2016}\mu_{2.1iii} = \tau_{2.1iii} = 100\%$$ ***(am)***

I-score$_{2.1iii}$

On Track ???

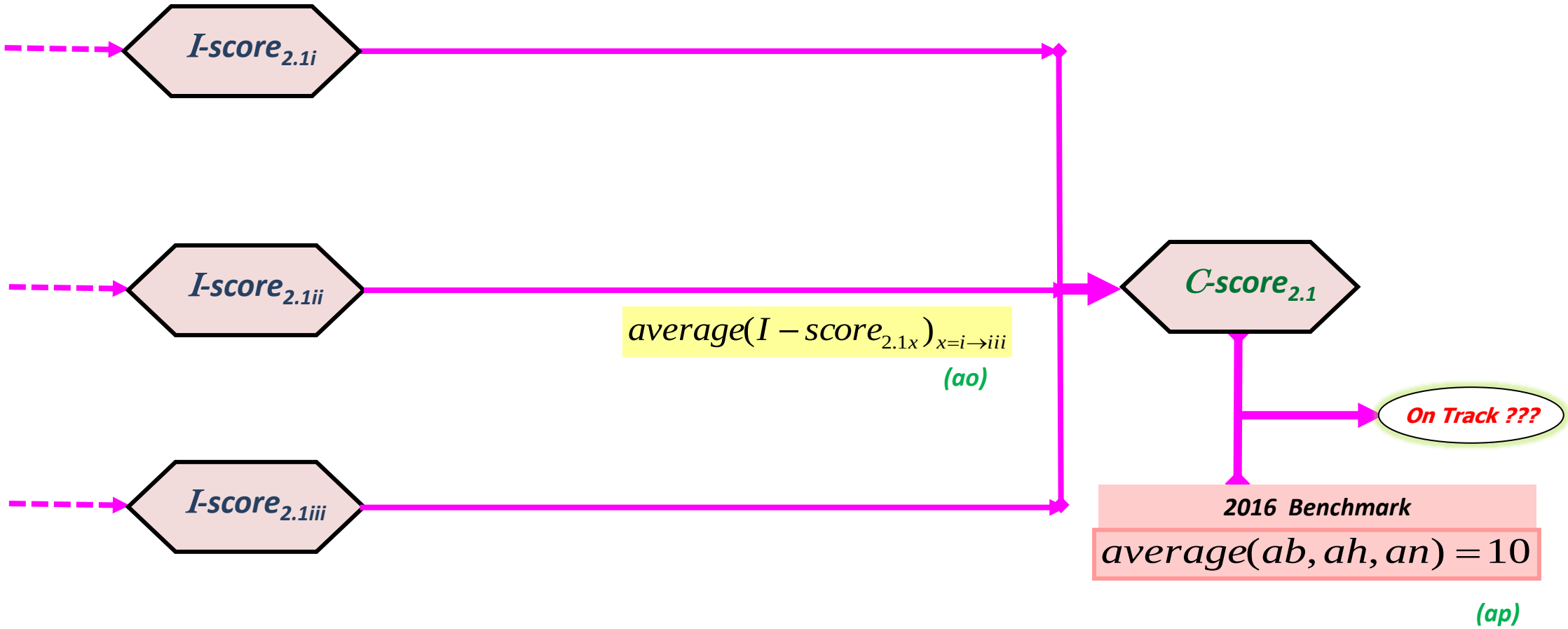
2016 Benchmark

$$_{2016}B_{2.1iii} = \frac{_{2016}\mu_{2.1iii} \times 10}{\tau_{2.1iii}} = 10$$ ***(an)***

Baseline Yr 2015

Target Yr **2025**

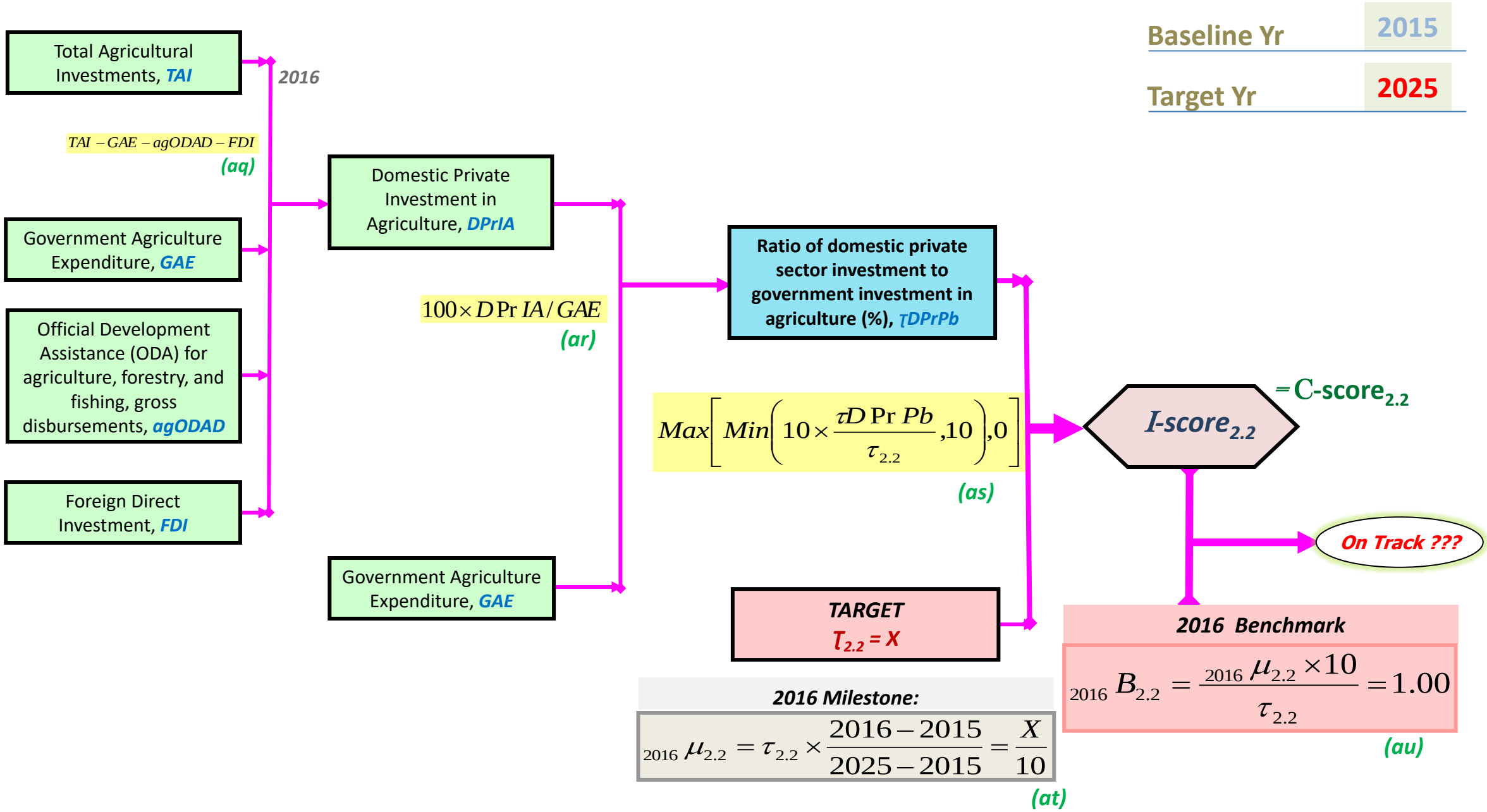
C-score$_{2.1}$ | Combined progress on Public Expenditures to Agriculture



PC 2.2 | Domestic Private Sector Investment in Agriculture

2.2- Ensure that government investment leverage at least X times, domestic private investment in agriculture sector by 2025.

I-score$_{2.2}$ | Estimating progress on domestic private investment in agriculture



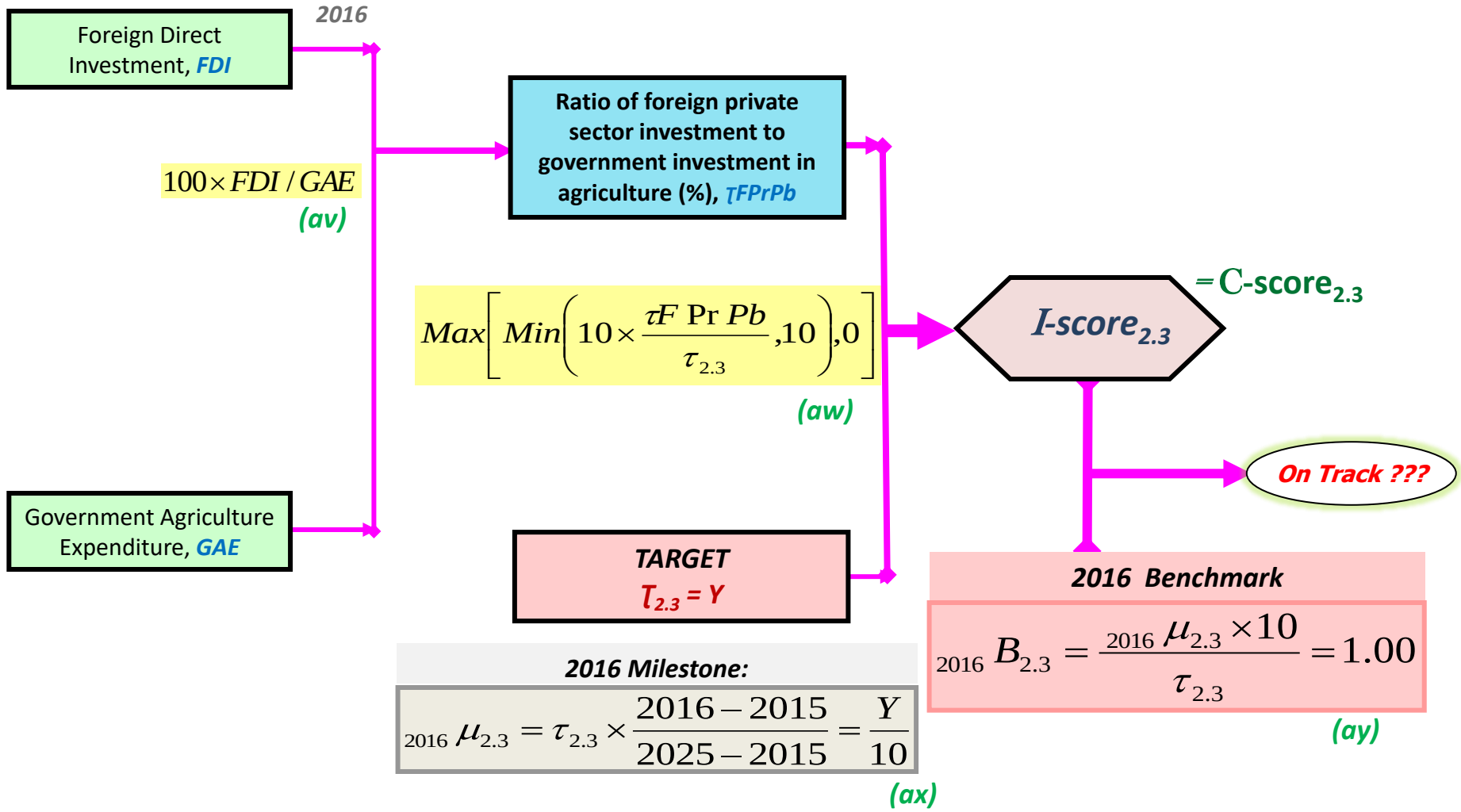
PC 2.3 | Foreign Private Sector Investment in Agriculture

2.3- Ensure that government investment leverage at least Y times, foreign private direct investment in agriculture sector by 2025.

I-score$_{2.3}$ | Estimating progress on foreign private investment in agriculture

Baseline Yr 2015

Target Yr 2025



PC 2.4 | Market Access

2.4- Ensure that 100% of men and women engaged in agriculture have access to financial services to be able to transact agriculture business, by 2018.

I-score$_{2.4}$ | Estimating progress on market access

Baseline Yr 2015

Target Yr 2018

Total number of men engaged in agriculture, ***NtAgM***

Total number women engaged in agriculture, ***NtAgW***

2016

$NtAgM + NtAgW$

(az)

Total number of men and women engaged in agriculture, ***NtAg***

$100 \times NtAg / NfsAg$

(bb)

Number of men engaged in agriculture that have access to financial services, ***NfsAgM***

Number of women engaged in agriculture that have access to financial services, ***NfsAgW***

2016

$NfsAgM + NfsAgW$

(ba)

Number of men and women engaged in agriculture that have access to financial services, ***NfsAg***

Proportion of men and women engaged in agriculture with access to financial services, *τAgFs*

$$\frac{\tau AgFs \times 10}{\tau_{2.4}}$$

(bc)

TARGET
$T_{2.4}$ = 100%

2016 Milestone:

$$_{2016}\mu_{2.4} = \frac{(2016-2015)}{(2018-2015)} \times \tau_{2.4} = 33\%$$

(bd)

I-score$_{2.4}$ = C-score$_{2.4}$

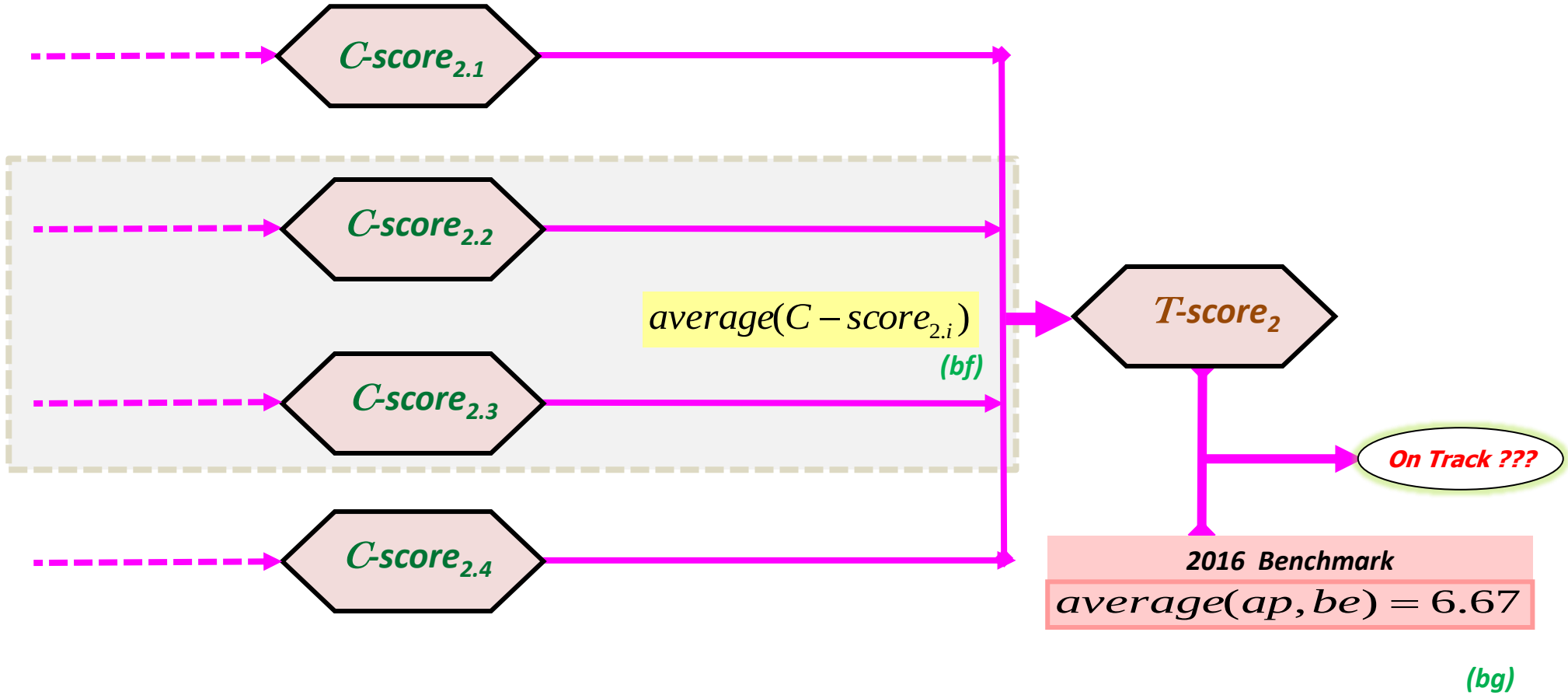
On Track ???

2016 Benchmark

$$_{2016}B_{2.4} = \frac{_{2016}\mu_{2.4} \times 10}{\tau_{2.4}} = 3.33$$

(be)

$T\text{-score}_2$ | Overall progress for Theme 2: "INVESTMENT FINANCE IN AGRICULTURE"



Technical Notes 3

Performance Evaluation for achieving goals under Theme 3 : "ENDING HUNGER"

PC 3.1 | Access to Agriculture inputs and technologies

3.1i- Ensure minimum use of fertilizer for African agriculture development at level of consumption of at least 50 kilograms/ha of arable land, from 2015 to 2025.

3.1ii- Increase the size of irrigated areas (as per its value observed in the year 2000), by 100% by the year 2025.

3.1iii- Double (100% increase) the current levels of quality agricultural inputs for crops (seed), livestock (breed), and fisheries (fingerlings) by 2025, from 2015.

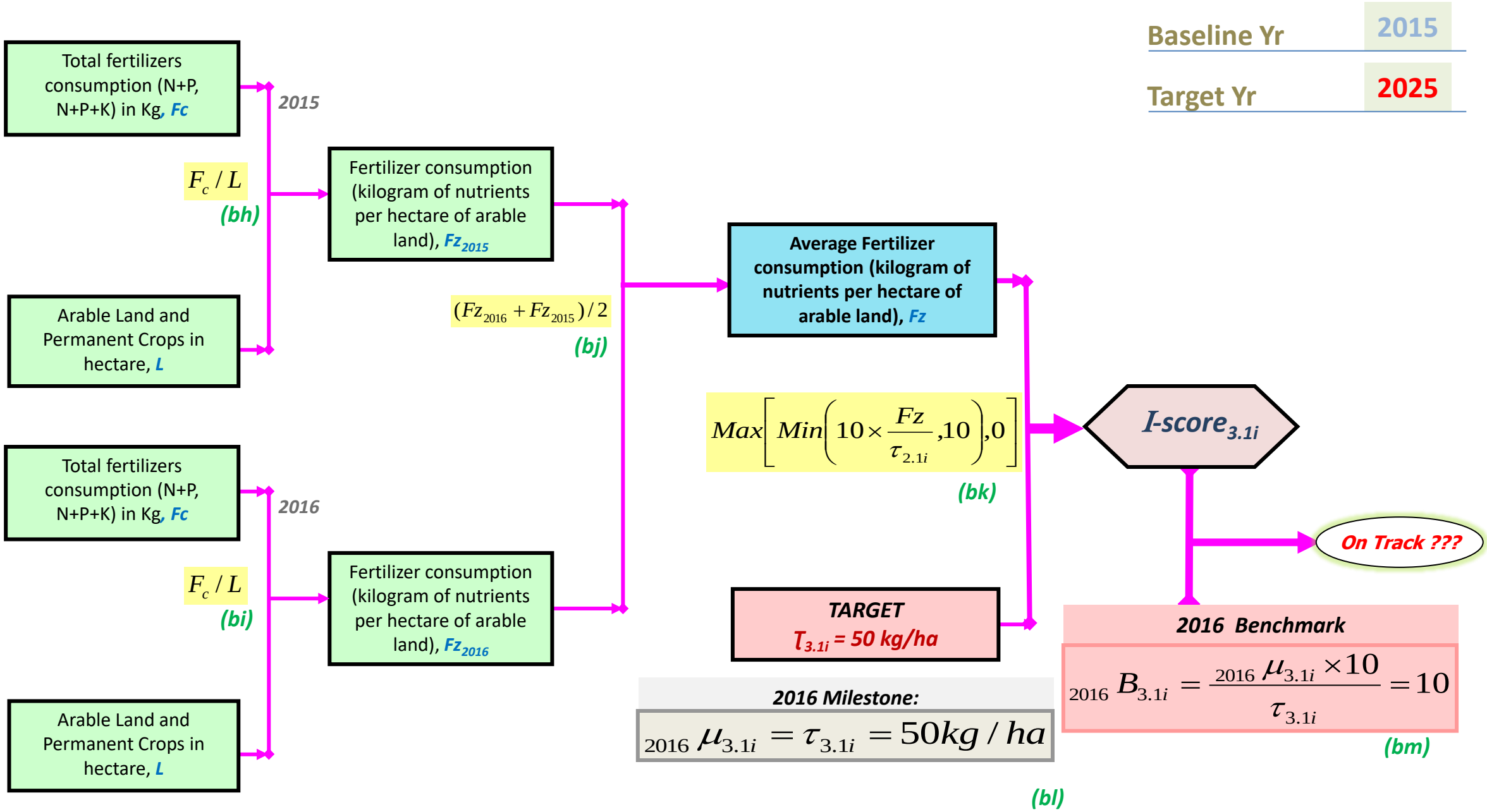
PC 3.1 | Access to Agriculture inputs and technologies

3.1iv- All farmers have access to quality agricultural advisory services that provide locally relevant knowledge, information and other services by 2018.

3.1v- Increase the level of Investments in Agricultural Research and Development to at least 1% of the Agricultural GDP, from 2015 to 2025.

3.1vi- Ensure that 100% of farmers and agribusiness interested in agriculture have rights to access the required land, by 2018.

I-score$_{3.1i}$ | Estimating progress on fertilizer use (organic and/or inorganic)



I-score$_{3.1ii}$| Estimating progress on the size of irrigated areas

Baseline Yr 2000

Target Yr 2025

Size of Irrigated areas , IA_{2016}

Size of Irrigated areas , IA_{2000}

$100 \times (IA_{2016} - IA_{2000}) / IA_{2000}$ *(bn)*

Growth rate of the size of irrigated area (in %), R_iIA

$$\begin{cases} \max\left(\left[\frac{R_iIA}{25\%} \times 2.5\right];0\right)_{R_iIA \le 25\%} \\ \left(2.5 + \frac{R_iIA - 25\%}{50\% - 25\%}(5.0 - 2.5)\right)_{25\% \le R_iIA \le 50\%} \\ \min\left(\left[5.0 + \frac{R_iIA - 50\%}{100\% - 50\%}(10 - 5.0)\right];10\right)_{50\% \le R_iIA} \end{cases}$$

$$\ldots = Max\left[Min\left(10 \times \frac{RiIA}{\tau_{3.1ii}}, 10\right), 0\right]$$

(bo)

I-score$_{3.1ii}$

On Track ???

TARGET
$\tau_{3.1ii}$ = 100%

2016 Benchmark

$$_{2016}B_{3.1ii} = \frac{_{2016}\mu_{3.1ii} \times 10}{\tau_{3.1ii}} = 5.50$$

(bq)

2016 Milestone:

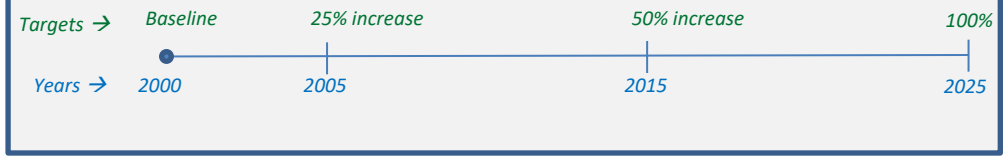
$$_{2016}\mu_{3.1ii} = {}_{2015}\mu_{3.1ii} + \frac{(2016-2015)}{(2025-2015)} \times (\tau_{3.1ii} - {}_{2015}\mu_{3.1ii}) = 55\%$$

(bp)

(***) $_{2005}\mu_{3.1ii} = 25\%$ $_{2015}\mu_{3.1ii} = 50\%$

The milestone 2005 of 25% and the milestone 2015 of 50% in the same commitment, are to be considered in the scoring method. It is called the multi-targets situation in the Easy-Theory. (***)

Multi-targets commitment on the size of irrigated areas in the African Water Vision 2025, used in this performance category.



I-score$_{3.1iii}$ | Estimating progress on quality agricultural inputs for crops (seed), livestock (breed), and fisheries (fingerlings)

Baseline Yr 2015

Target Yr 2025

Total national quality agriculture inputs requirement for the considered commodity *I*, $AgIR_i$

$AgIS_i / AgIR_i$ *(br)*

Supplied quality agriculture inputs for the commodity i , $AgIS_i$

Ratio of supplied quality agriculture inputs to the total national inputs requirements for the commodity *i*, R_i

2015

$100 \times (Ri_{2016} - Ri_{2015}) / Ri_{2015}$ *(bt)*

Growth rate of the ratio of supplied quality agriculture inputs to the total national inputs requirements for the commodity *i*: τAI_i

Total national quality agriculture inputs requirement for the considered commodity *I*, $AgIR_i$

$AgIS_i / AgIR_i$ *(bs)*

Supplied quality agriculture inputs for the commodity i , $AgIS_i$

Ratio of supplied quality agriculture inputs to the total national inputs requirements for the commodity *i*, R_i

2016

Commodity i , τAI_i

Commodity j, τAI_j

$average(\tau AI_x)_{x=i,j,...}$ *(bu)*

Average Growth rate of the ratio of supplied quality agriculture inputs to the total national inputs requirements , τAI

$$Max\left[Min\left(10 \times \frac{\tau AI}{\tau_{3.1iii}}, 10\right), 0\right]$$ *(bv)*

TARGET
$T_{3.1iii}$ = 100%

2016 Milestone:

$$_{2016}\mu_{3.1iii} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{3.1iii} = 10\%$$ *(bw)*

I-score$_{3.1iii}$

On Track ???

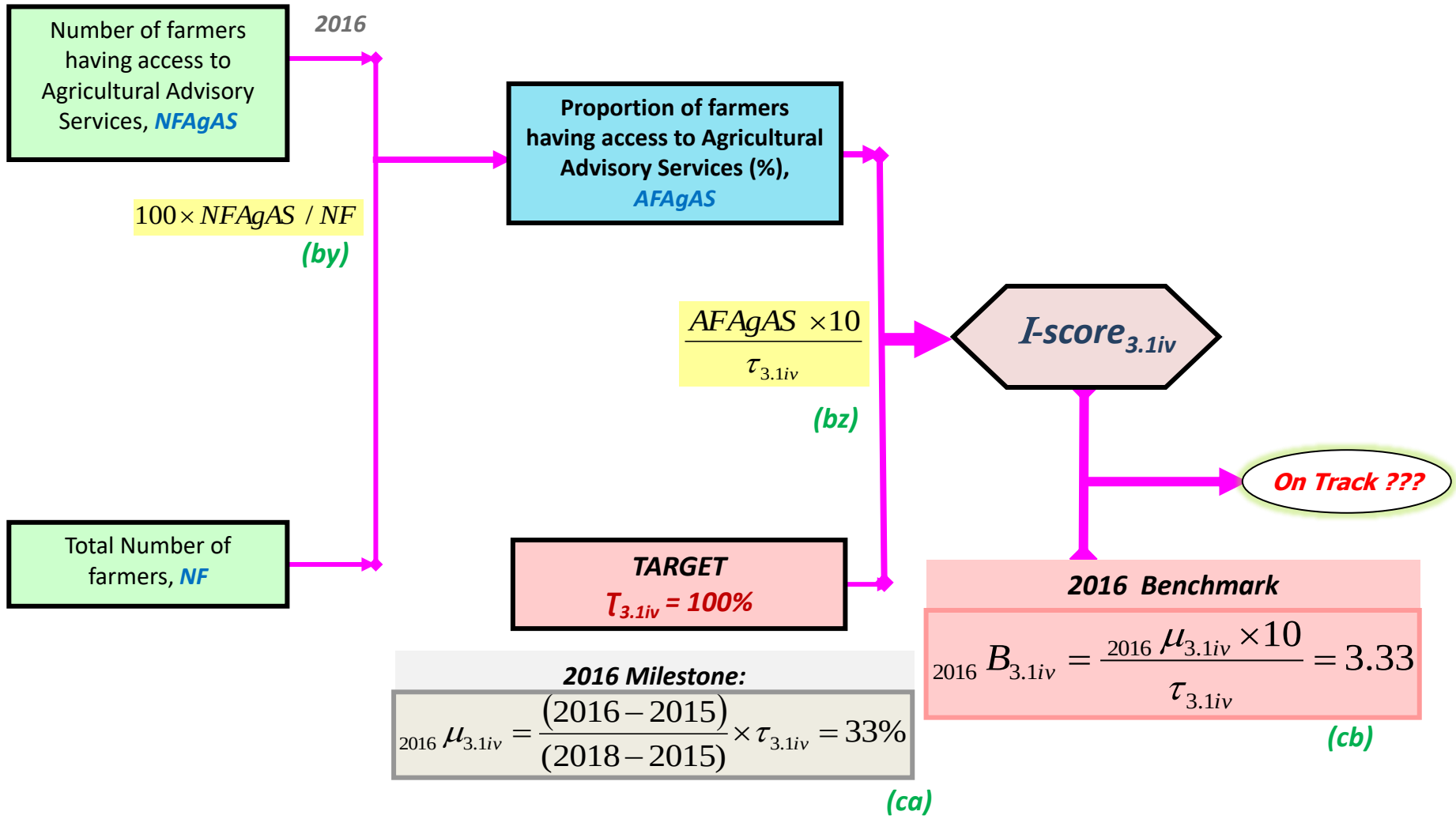
2016 Benchmark

$$_{2016}B_{3.1iii} = \frac{_{2016}\mu_{3.1iii} \times 10}{\tau_{3.1iii}} = 1.00$$ *(bx)*

I-score$_{3.1iv}$ | Estimating progress on access to quality agricultural advisory services

Baseline Yr 2015

Target Yr 2018



I-score$_{3.1v}$ | Estimating progress on investment in agriculture research and development

Baseline Yr 2015

Target Yr 2025

Total Agricultural Research Spending, ***TARS***

2015

$100 \times TARS / AgGDP$ *(cc)*

Total Agricultural Research Spending as a share of AgGDP, $\tau TARS_{2015}$

Agriculture, value added, ***AgGDP***

$(\tau TARS_{2016} + \tau TARS_{2015}) / 2$ *(ce)*

Average of Total Agricultural Research Spending as a share of AgGDP, $\tau TARS$

$$Max\left[Min\left(10 \times \frac{\tau TARS}{\tau_{3.1v}}, 10\right), 0\right]$$ *(cf)*

I-score$_{3.1v}$

On Track ???

Total Agricultural Research Spending, ***TARS***

2016

$100 \times TARS / AgGDP$ *(cd)*

Total Agricultural Research Spending as a share of AgGDP, $\tau TARS_{2016}$

Agriculture, value added, ***AgGDP***

TARGET
$\tau_{3.1v}$ = 1%

2016 Milestone:

$$_{2016}\mu_{3.1v} = \tau_{3.1v} = 1\%$$ *(cg)*

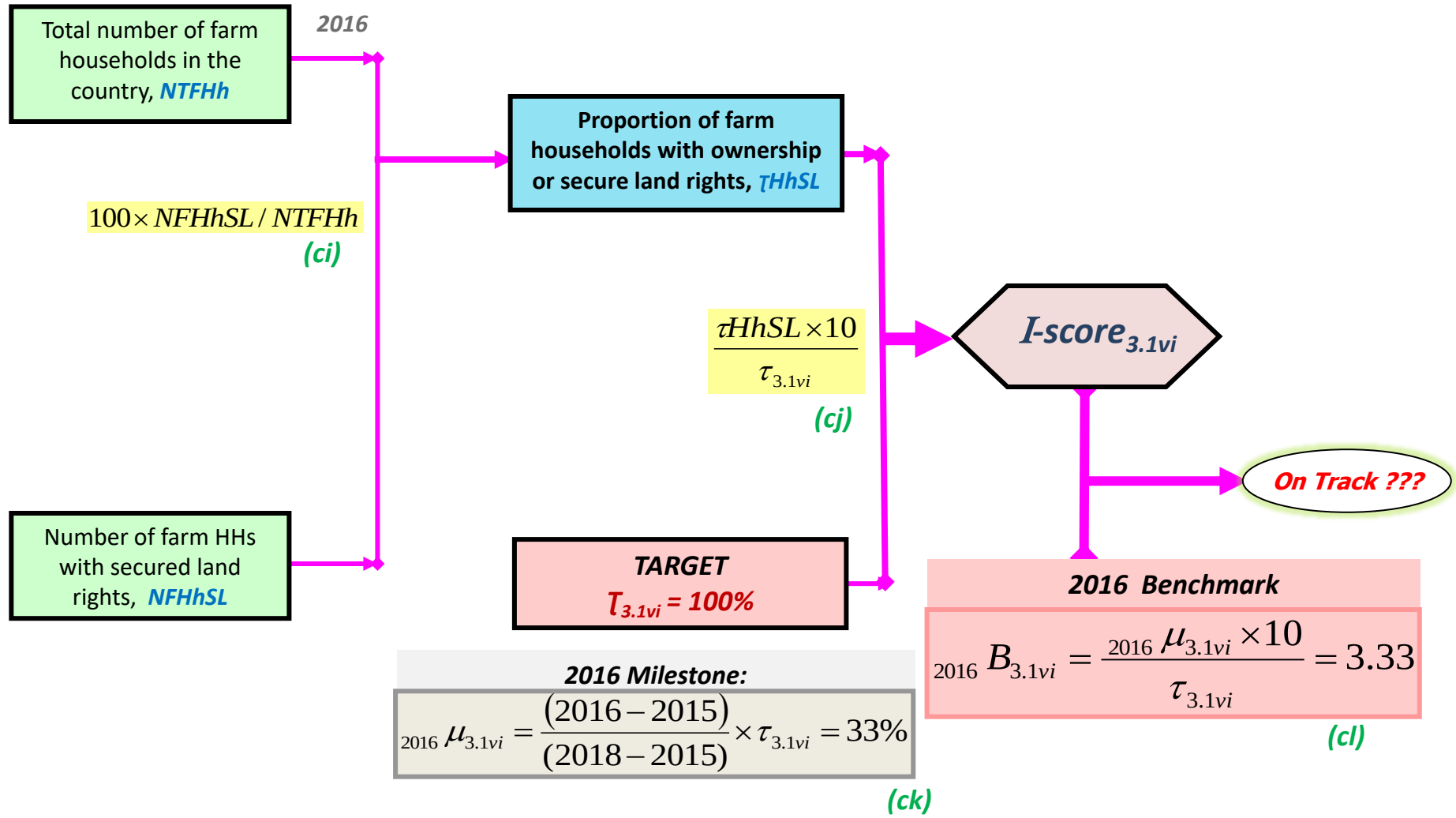
2016 Benchmark

$$_{2016}B_{3.1v} = \frac{_{2016}\mu_{3.1v} \times 10}{\tau_{3.1v}} = 10$$ *(ch)*

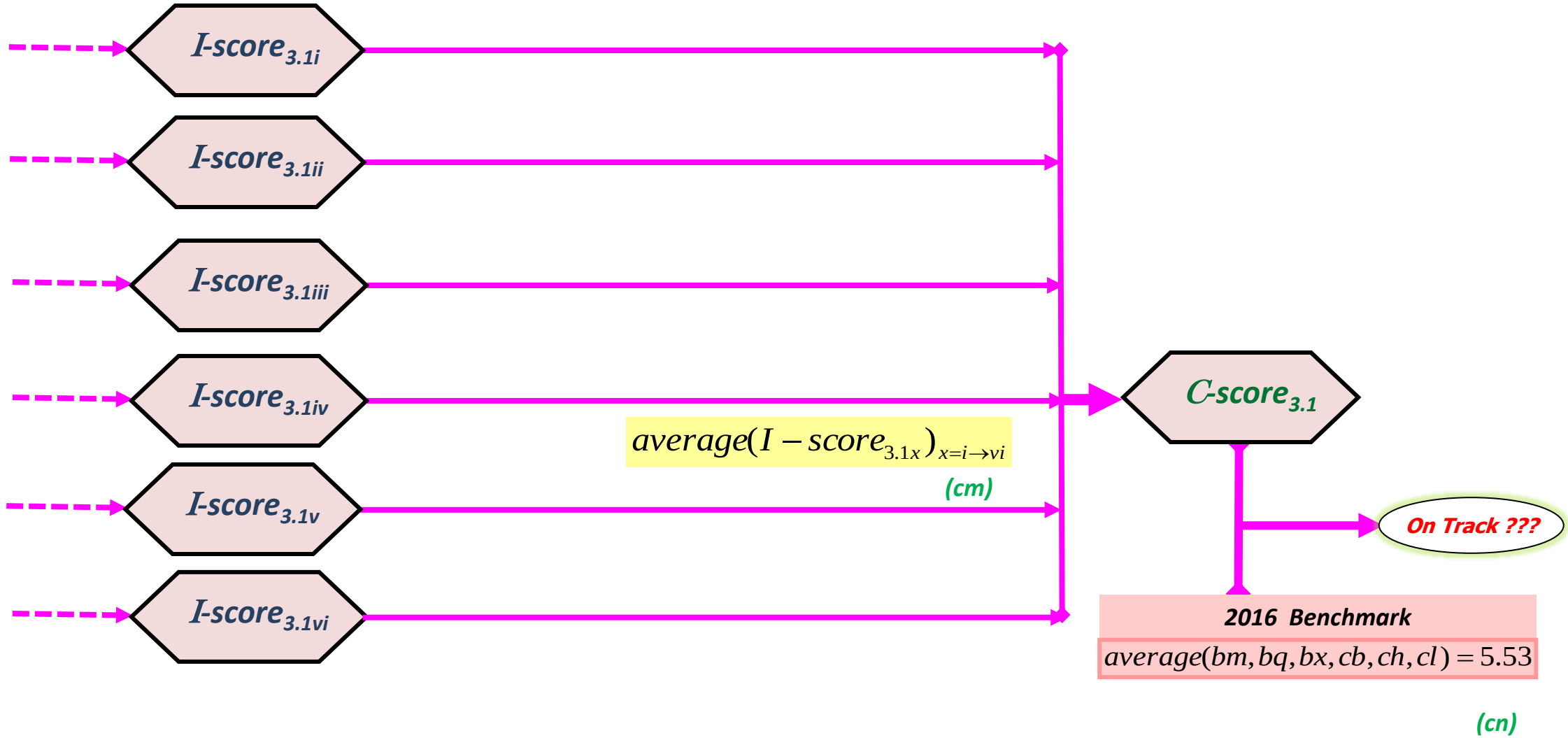
I-score$_{3.1vi}$ | Estimating progress on access to land

Baseline Yr 2015

Target Yr 2018



C-score$_{3.1}$ | Combined progress on Access to Agriculture inputs and technologies



PC 3.2 | Agricultural Productivity

3.2i- Double (100% increase) the current agricultural labor productivity levels by the from 2015 to 2025.

3.2ii- Double (increase by 100%) the current agricultural land productivity levels, by 2025 from 2015.

3.2iii- Double (100% increase) the current agricultural yield levels, by 2025 from 2015.

I-score$_{3.2i}$ | Estimating progress on labor productivity

Baseline Yr 2015

Target Yr 2025

2011 to 2015

Agriculture value added in constant US dollars, $AgGDP_t$

$AgGDP_t / W_t$ *(co)*

Agricultural worker, W_t

Agricultural value added per agricultural worker (constant 2010 USD), AgW_t

$average(AgW_t)_{t=2011 \rightarrow 2015}$ *(cq)*

Average Agricultural value added per agricultural worker (constant 2010 USD), AgW_{av}

$100 \times (AgW_{2016} - AgW_{av.}) / AgW_{av.}$ *(cr)*

Growth rate of Agriculture value added per agricultural worker , τAgW

2016

Agriculture value added in constant US dollars, $AgGDP_{2016}$

$AgGDP_{2016} / W_{2016}$ *(cp)*

Agricultural worker, W_{2016}

Agricultural value added per agricultural worker (constant 2010 USD), AgW_{2016}

$$Max\left[Min\left(10 \times \frac{\tau AgW}{\tau_{3.2i}}, 10\right), 0\right]$$ *(cs)*

I-score$_{3.2i}$

On Track ???

TARGET
$\tau_{3.2i}$ = 100%

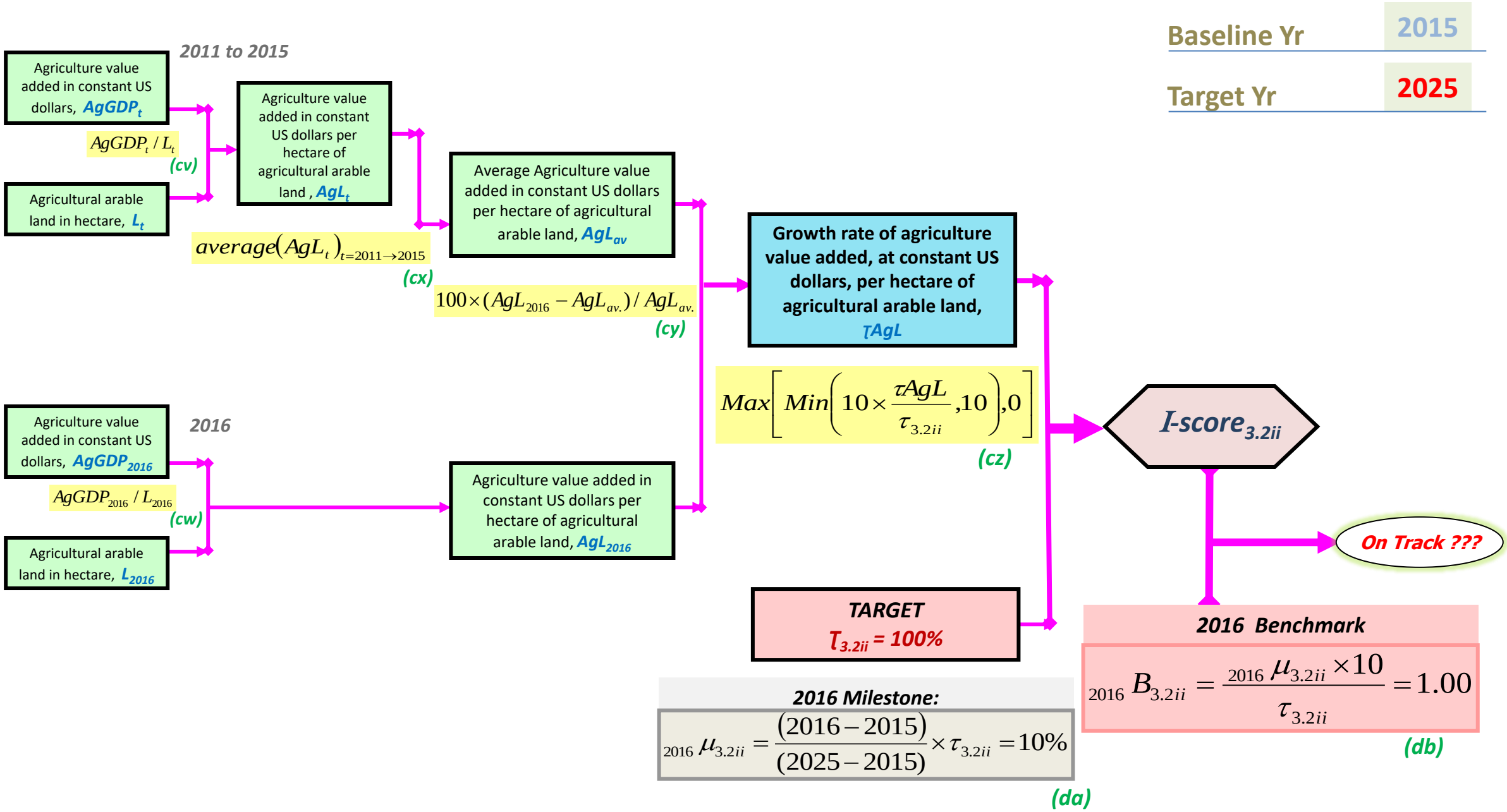
2016 Milestone:

$$_{2016}\mu_{3.2i} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{3.2i} = 10\%$$ *(ct)*

2016 Benchmark

$$_{2016}B_{3.2i} = \frac{_{2016}\mu_{3.2i} \times 10}{\tau_{3.2i}} = 1.00$$ *(cu)*

I-score$_{3.2ii}$ | Estimating progress on land productivity



I-score$_{3.2iii}$ | Estimating progress on agricultural yield

Baseline Yr 2015

Target Yr 2025

Total production of commodity *i* at year t , Pd_{i-t}

2011 to 2015

Pd_{i-t} / L_{i-t} (dc)

Total size of the production unit of the commodity i at year t , L_{i-t}

Yield of commodity *i*, Y_{i-t}

$average(Y_{i-t})_{t=2011 \rightarrow 2015}$ (de)

Average value of the Yield of commodity i, Y_{i-av}

Growth rate of the yield of the commodity *i*, τY_i

$average(\tau Y_i)_{comodities}$ (dg)

Total production of commodity *i* in 2016, Pd_{i-2016}

2016

Pd_{i-2016} / L_{i-2016} (dd)

Total size of the production unit of the commodity i in 2016, L_{i-2016}

Yield of commodity *i* in 2016, Y_{i-2016}

$100 \times \frac{(Y_{i-2016} - Y_{i-av.})}{Y_{i-av.}}$ (df)

Commodity i , τY_i

Commodity j, τY_j

Average of observed growth rates of agricultural yields for all the commodities, τY

$Max\left[Min\left(10 \times \frac{\tau Y}{\tau_{3.2iii}}, 10 \right), 0 \right]$ (dh)

I-score$_{3.2iii}$

On Track ???

TARGET

$\tau_{3.2iii}$ = 100%

2016 Milestone:

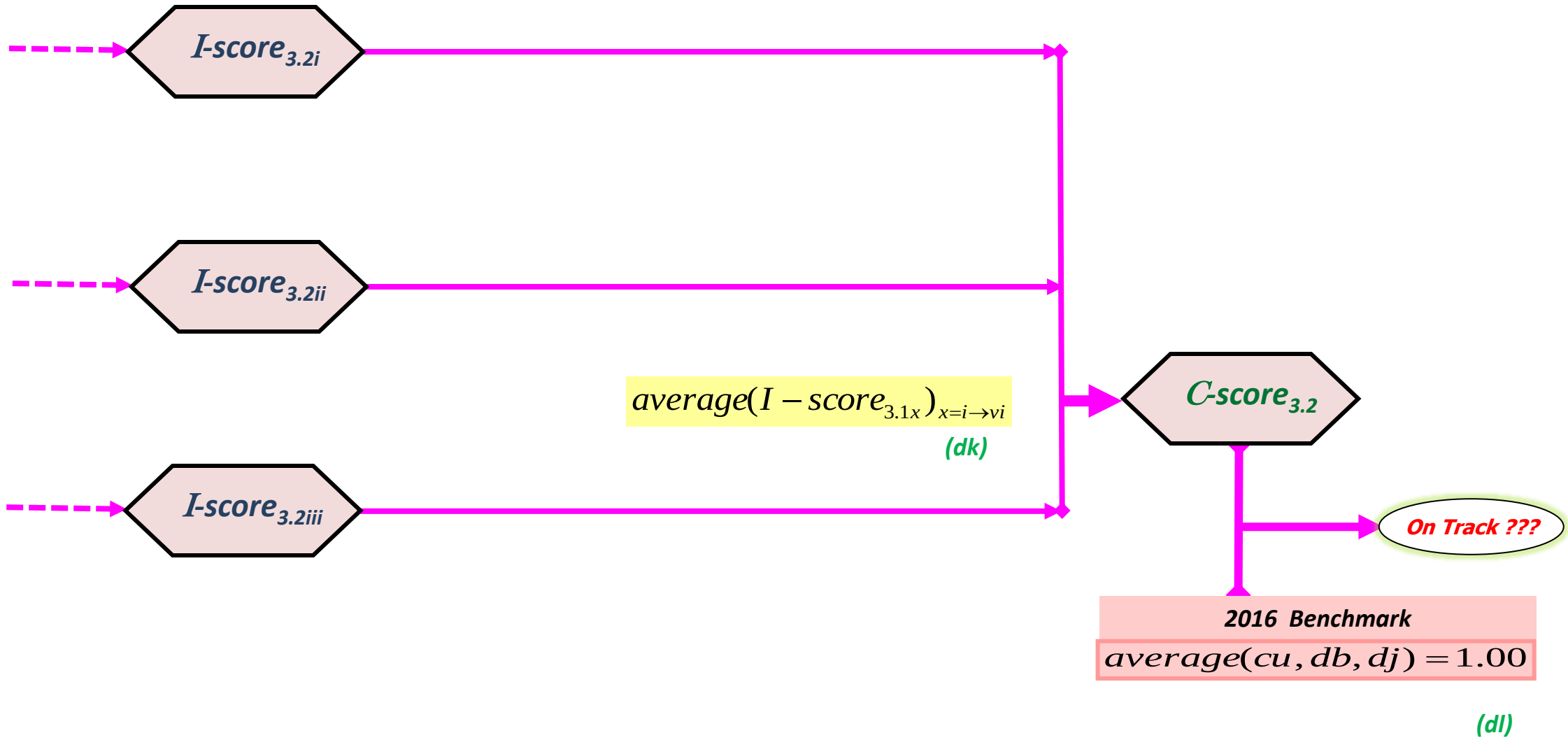
$${}_{2016}\mu_{3.2iii} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{3.2iii} = 10\%$$ (di)

2016 Benchmark

$${}_{2016}B_{3.2iii} = \frac{{}_{2016}\mu_{3.2iii} \times 10}{\tau_{3.2iii}} = 1.00$$ (dj)

For at least the 5 priority commodities of the country and the 11 African Union priority commodities that include: *-Rice, -Maize, -Legumes, -Cotton, -Oil palm, -Beef, -Dairy, -Poultry and fisheries, -Cassava, -Sorghum and -Millet.*

C-score$_{3.2}$ | Combined progress on Agriculture Productivity



PC 3.3 | Post-Harvest Loss

3.3- Halve (decrease by 50%) the current levels of Post-Harvest Losses (PHL), by the 2025 from 2015.

I-score$_{3.3}$| Estimating progress on Post-Harvest Loss

Baseline Yr 2015

Target Yr 2025

Total production of commodity *i at year t* , Pd_{i-t}

Total loss of the commodity i *at year t* , Ls_{i-t}

2011 to 2015

Ls_{i-t} / Pd_{i-t} *(dm)*

Post harvest Loss of the commodity *i*, PHL_{i-t}

$average(PHL_{i-t})_{t=2011\rightarrow2015}$ *(do)*

Average value of the Post harvest Loss of commodity i, PHL_{i-av}

Total production of commodity *i in 2016*, Pd_{i-2016}

Total loss of the commodity i in 2016, Ls_{i-2016}

2016

$Ls_{i-2016} / Pd_{i-2016}$ *(dn)*

Post harvest Loss of commodity *I in 2016* , Y_{i-2016}

$100 \times \frac{(PHL_{i-av.} - PHL_{i-2016})}{PHL_{i-av.}}$ *(dp)*

Reduction rate of the post-harvest loss of the commodity *i*, τPHL_i

$average(\tau PHL_i)_{commodities}$ *(dq)*

Commodity i , τPHL_i

Commodity j, τPHL_j

Average of observed reduction rates of post-harvest loss for all the commodities, τPHL

$Max\left[Min\left(10 \times \frac{\tau PHL}{\tau_{3.3}}, 10\right), 0\right]$ *(dr)*

TARGET

$T_{3.3} = 50\%$

2016 Milestone:

$${}_{2016}\mu_{3.3} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{3.3} = 5\% \quad \textit{(ds)}$$

$I\text{-score}_{3.3}$ = C-score$_{3.3}$

On Track ???

2016 Benchmark

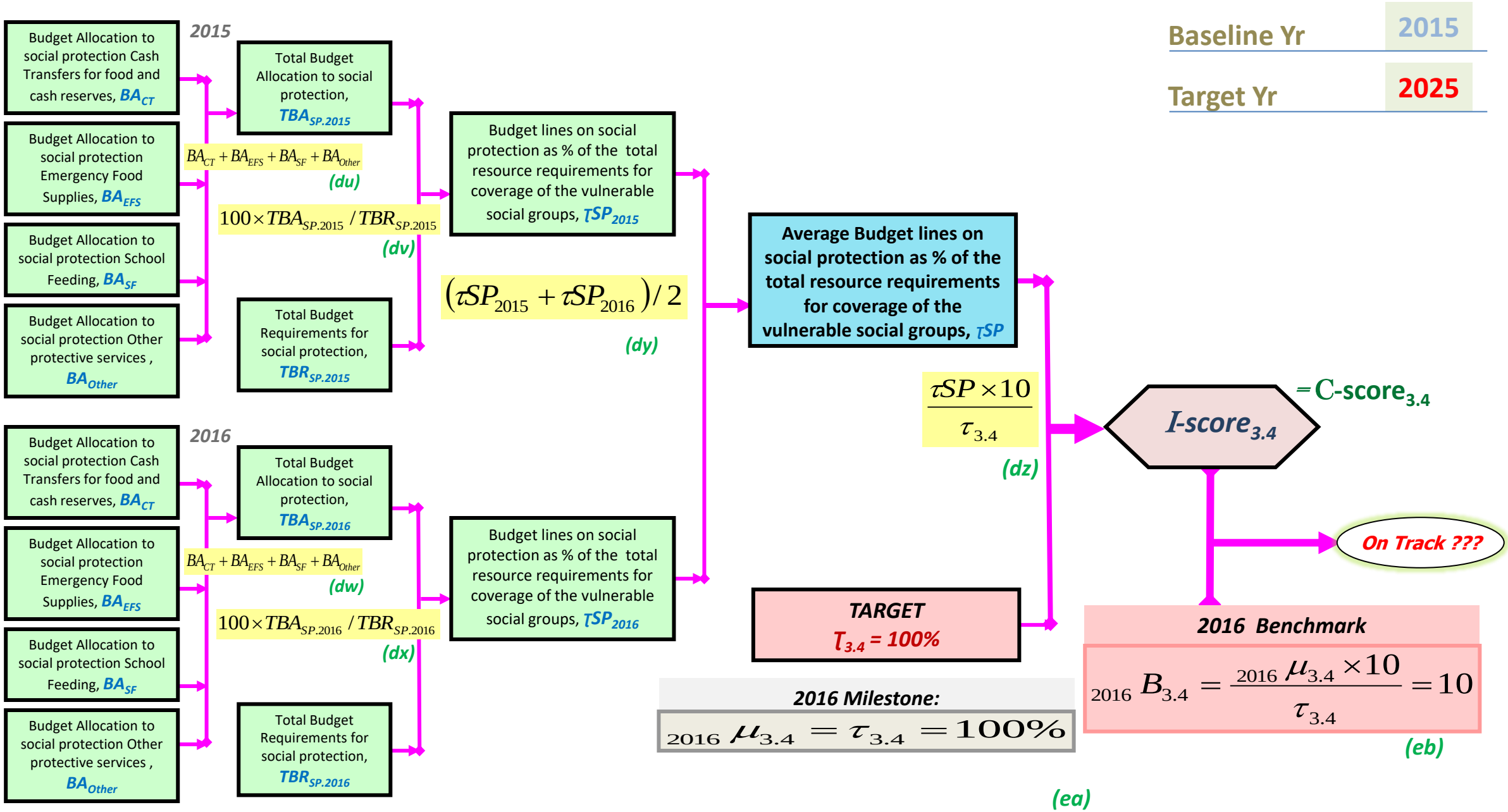
$${}_{2016}B_{3.3} = \frac{{}_{2016}\mu_{3.3} \times 10}{\tau_{3.3}} = 1.00 \quad \textit{(dt)}$$

For at least the 5 priority commodities of the country and the 11 African Union priority commodities that include: *-Rice, -Maize, -Legumes, -Cotton, -Oil palm, -Beef, -Dairy, -Poultry and fisheries, -Cassava, -Sorghum and -Millet.*

PC 3.4 | Social Protection

3.4- Commit within national budgets, budget lines that amount to 100% of the total resource requirements for coverage of the vulnerable social groups, from 2015 to 2025, for use to support social protection initiatives, and to address any eventual disasters and emergencies with food and nutrition security implications.

I-score$_{3.4}$ | Estimating progress on Social Protection



PC 3.5 | Food security and Nutrition

3.5i- Bring down child stunting to 10% or less, by 2025.

3.5ii- Bring down underweight to 5% or less, by 2025.

3.5iii- Bring down wasting to 5% or less, by 2025.

PC 3.5 | Food security and Nutrition

3.5iv- Bring down undernourishment to 5% or less, by 2025.

3.5v- Increase the proportion of women at reproductive age that attain the minimum dietary diversity by 50%, by 2025.

3.5vi- Reach at least 50% of children 6-23 months that have the minimum acceptable diet by 2025.

I-score$_{3.5i}$ | Estimating progress on prevalence of stunting

Baseline Yr 2015

Target Yr 2025

2015

Prevalence of stunting (% of children under 5 years old), St_0

2016

Prevalence of stunting (% of children under 5 years old), St

$$\begin{cases} \left[\max\left(\min\left(\frac{(St_0 - St)}{(St_0 - \tau_{3.5i})} \times 10, 10\right), 0\right)\right]_{St_0 > \tau_{3.5i}} \\ [10]_{St_0 \le \tau_{3.5i}\,(and)\;\; St \le \tau_{3.5i}} \\ [0]_{St_0 \le \tau_{3.5i}\,(and)\;\; St > \tau_{3.5i}} \end{cases} \quad (ec)$$

I-score$_{3.5i}$

On Track ???

TARGET
$T_{3.5i}$ = 10%

2016 Benchmark

$$_{2016}B_{3.5i} = \frac{St_0 - {}_{2016}\mu_{3.5i}}{St_0 - \tau_{3.5i}} \times 10 = 1.00 \quad (ee)$$

2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{3.5i} = St_0 - \frac{(2016-2015)}{(2025-2015)} \times (St_0 - \tau_{3.5i})\right]_{St_0 > \tau_{3.5i}} \\ [\tau_{3.5i}]_{St_0 \le \tau_{3.5i}} \end{cases} \quad (ed)$$

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

I-score$_{3.5ii}$| Estimating progress on prevalence of underweight

Baseline Yr 2015

Target Yr 2025

2015

Prevalence of underweight (% of children under 5 years old), Uw_0

2016

Prevalence of underweight (% of children under 5 years old), Uw

$$\begin{cases} \left[\max\left(\min\left(\frac{(Uw_0 - Uw)}{(Uw_0 - \tau_{3.5ii})} \times 10, 10\right), 0\right)\right]_{Uw_0 > \tau_{3.5ii}} \\ [10]_{Uw_0 \le \tau_{3.5ii}(and)\ Uw \le \tau_{3.5ii}} \\ [0]_{Uw_0 \le \tau_{3.5ii}(and)\ Uw > \tau_{3.5ii}} \end{cases} \quad (ef)$$

I-score$_{3.5ii}$

On Track ???

TARGET
$T_{3.5ii}$ = 5%

2016 Benchmark

$$_{2016}B_{3.5ii} = \frac{Uw_0 - {}_{2016}\mu_{3.5ii}}{Uw_0 - \tau_{3.5ii}} \times 10 = 1.00 \quad (eh)$$

2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{3.5ii} = Uw_0 - \frac{(2016-2015)}{(2025-2015)} \times (Uw_0 - \tau_{3.5ii})\right]_{Uw_0 > \tau_{3.5ii}} \\ [\tau_{3.5ii}]_{Uw_0 \le \tau_{3.5ii}} \end{cases} \quad (eg)$$

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

I-score$_{3.5iii}$ | Estimating progress on prevalence of wasting

Baseline Yr 2015

Target Yr 2025

2015

Prevalence of wasting (% of children under 5 old), W_0

2016

Prevalence of wasting (% of children under 5 old), W

$$\begin{cases} \left[\max\left(\min\left(\frac{(W_0 - W)}{(W_0 - \tau_{3.5iii})} \times 10, 10\right), 0\right)\right]_{W_0 > \tau_{3.5iii}} \\ [10]_{W_0 \le \tau_{3.5iii}\,(and)\;\; W \le \tau_{3.5iii}} \\ [0]_{W_0 \le \tau_{3.5iii}\,(and)\;\; W > \tau_{3.5iii}} \end{cases}$$

(ei)

I-score$_{3.5iii}$

On Track ???

TARGET
$T_{3.5iii}$ = 5%

2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{3.5iii} = W_0 - \frac{(2016 - 2015)}{(2025 - 2015)} \times (W_0 - \tau_{3.5iii})\right]_{W_0 > \tau_{3.5iii}} \\ [\tau_{3.5iii}]_{W_0 \le \tau_{3.5iii}} \end{cases}$$

(ej)

2016 Benchmark

$${}_{2016}B_{3.5iii} = \frac{W_0 - {}_{2016}\mu_{3.5iii}}{W_0 - \tau_{3.5iii}} \times 10 = 1.00$$

(ek)

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

I-score$_{3.5iv}$ Estimating progress on prevalence of undernourishment

Baseline Yr 2015

Target Yr 2025

Proportion of the population that is undernourished (% of the country's population), U_0 — *2015*

Proportion of the population that is undernourished (% of the country's population), U — *2016*

$$\begin{cases} \left[\max\left(\min\left(\frac{(U_0-U)}{(U_0-\tau_{3.5iv})}\times 10,10\right),0\right)\right]_{U_0>\tau_{3.5iv}} \\ [10]_{U_0\le\tau_{3.5iv}(and)\ U\le\tau_{3.5iv}} \\ [0]_{U_0\le\tau_{3.5iv}(and)\ U\ >\tau_{3.5iv}} \end{cases} \quad (el)$$

I-score$_{3.5iv}$

On Track ???

TARGET

$T_{3.5iv} = 5\%$

2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{3.5iv} = U_0 - \frac{(2016-2015)}{(2025-2015)}\times(U_0-\tau_{3.5iv})\right]_{U_0>\tau_{3.5iv}} \\ [\tau_{3.5iv}]_{U_0\le\tau_{3.5iv}} \end{cases} \quad (em)$$

2016 Benchmark

$${}_{2016}B_{3.5iv} = \frac{U_0 - {}_{2016}\mu_{3.5iv}}{U_0-\tau_{3.5iv}}\times 10 = 1.00 \quad (en)$$

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

I-score$_{3.5v}$| Estimating progress on Minimum Dietary Diversity-Women

Baseline Yr 2015

Target Yr 2025

Proportion of minimum Dietary Diversity-Women, $MDDW_{2015}$

2015

$100 \times (MDDW_{2016} - MDDW_{2015}) / MDDW_{2015}$

(eo)

Increase rate of the proportion of Minimum Dietary Diversity-Women (in %), $\tau MDDW$

$$Max\left[Min\left(10 \times \frac{\tau MDDW}{\tau_{3.5v}}, 10 \right), 0 \right]$$

(ep)

2016

Proportion of minimum Dietary Diversity-Women, $MDDW_{2016}$

I-score$_{3.5v}$

On Track ???

TARGET

$\tau_{3.5v} = 50\%$

2016 Milestone:

$$_{2016}\mu_{3.5v} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{3.5v} = 5\%$$

(eq)

2016 Benchmark

$$_{2016}B_{3.5v} = \frac{_{2016}\mu_{3.5v} \times 10}{\tau_{3.5v}} = 1.00$$

(er)

I-score$_{3.5vi}$ | Estimating progress on child Minimum Acceptable Diet

Baseline Yr 2015

Target Yr 2025

Proportion of 6-23 months old children who meet the Minimum Acceptable Diet, MAD_0

2015

Proportion of 6-23 months old children who meet the Minimum Acceptable Diet, *MAD*

2016

$$\begin{cases} \left[\max\left(\min\left(\frac{(MAD - MAD_0)}{(\tau_{3.5vi} - MAD_0)} \times 10, 10\right), 0\right)\right]_{MAD_0 < \tau_{3.5vi}} \\ [10]_{MAD_0 \geq \tau_{3.5vi}\,(and)\;\; MAD \geq \tau_{3.5vi}} \\ [0]_{MAD_0 \geq \tau_{3.5vi}\,(and)\;\; MAD < \tau_{3.5vi}} \end{cases}$$

(es)

I-score$_{3.5vi}$

On Track ???

TARGET
$\tau_{3.5vi}$ = 50%

2016 Benchmark

$$_{2016}B_{3.5vi} = \frac{_{2016}\mu_{3.5vi} - MAD_0}{\tau_{3.5vi} - MAD_0} \times 10 = 1.00$$

(eu)

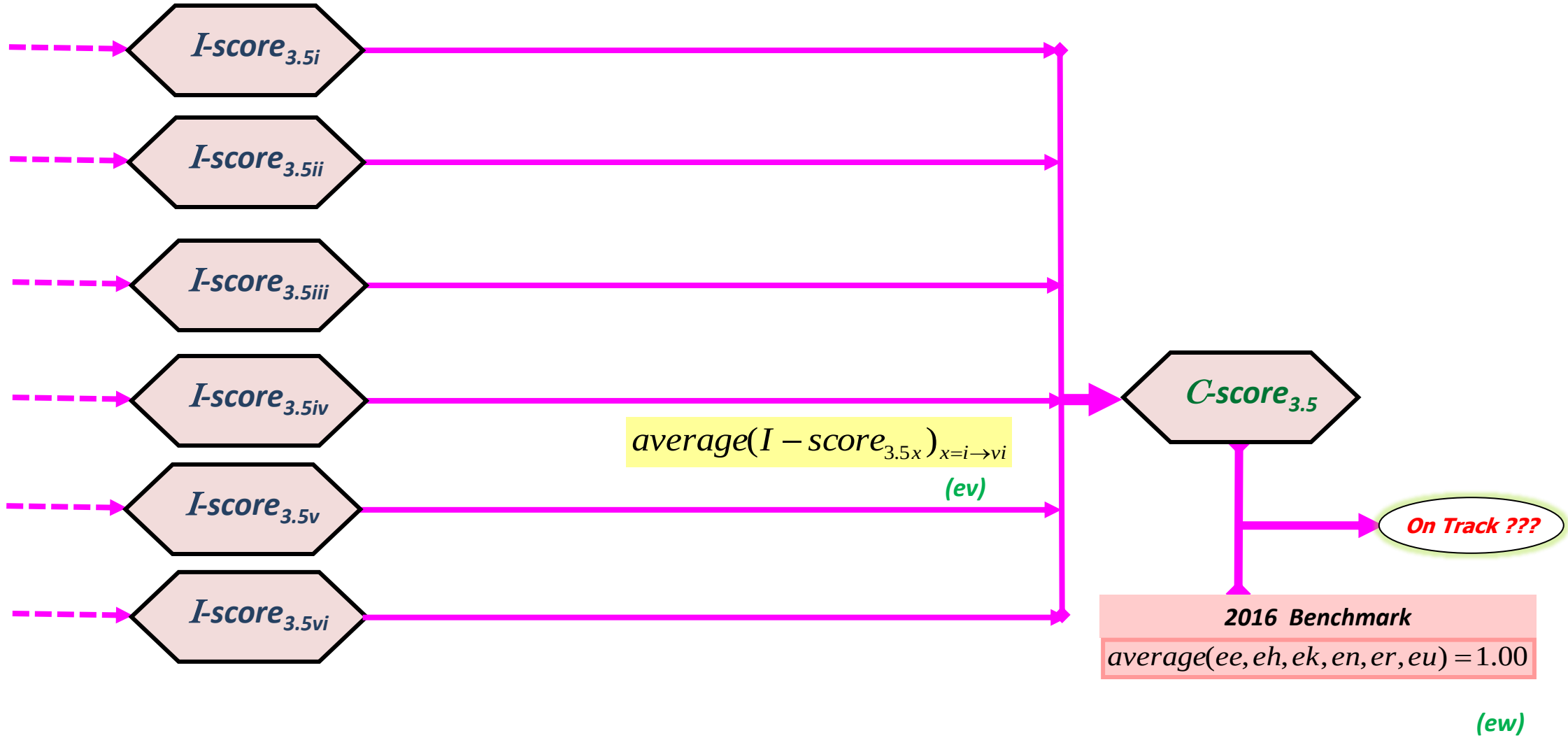
2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{3.5vi} = MAD_0 + \frac{(2016 - 2015)}{(2025 - 2015)} \times (\tau_{3.5vi} - MAD_0)\right]_{MAD_0 < \tau_{3.5vi}} \\ [\tau_{3.5vi}]_{MAD_0 \geq \tau_{3.5vi}} \end{cases}$$

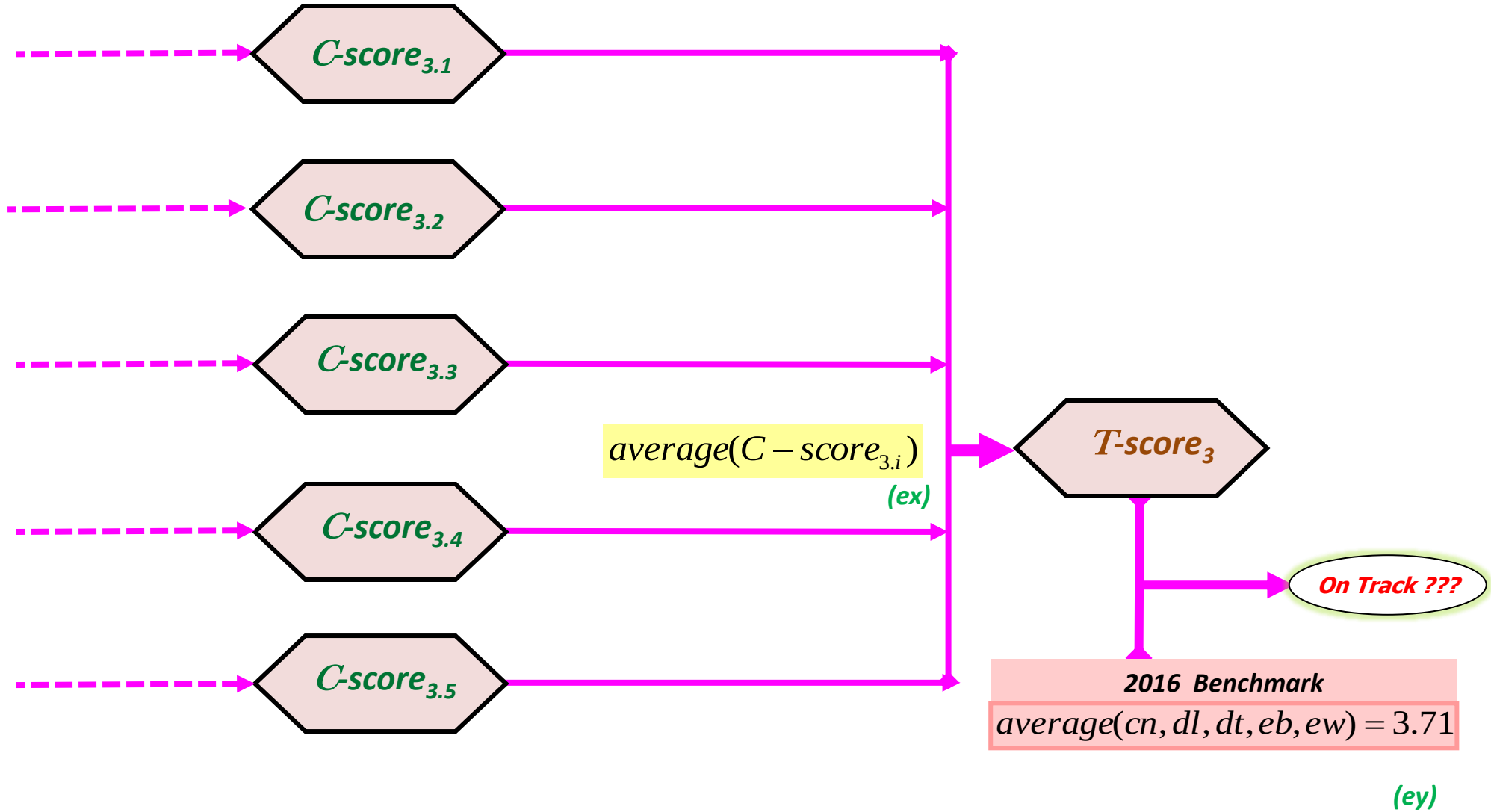
(et)

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

C-score$_{3.5}$ | Combined progress on Food security and Nutrition



$T\text{-score}_3$ | Overall progress for Theme 3: "ENDING HUNGER"



Technical Notes 4

Performance Evaluation for achieving goals under Theme 4 : "ERADICATING POVERTY THROUGH AGRICULTURE"

PC 4.1 | Agricultural GDP and Poverty Reduction

4.1i- Sustain annual agricultural GDP growth of at least 6%, from 2015 to 2025.

4.1ii- Ensure that agriculture growth contribute to at least 50% to the overall poverty reduction target, from 2015 to 2025.

4.1iii- Reduce poverty level by at least 50%, at national poverty line, from 2015 to 2025.

PC 4.1 | Agricultural GDP and Poverty Reduction

4.1iv- Reduce poverty level by at least 50%, at international poverty line, from 2015 to 2025.

4.1v- Contribute to poverty reduction by reducing the gap between the wholesale price and farm-gate price, by 50% , by 2025, from 2015.

I-score$_{4.1i}$ | Estimating progress on agricultural GDP growth

Baseline Yr 2015

Target Yr 2025

Agriculture value added in constant US dollars, $AgGDP_t$

2011 to 2015

$average(AgGDP_t)_{t=2011 \rightarrow 2015}$

(ez)

Agriculture value added in constant US dollars, $AgGDP_{2015}$

$100 \times (AgGDP_{2016} - AgGDP_{2015}) / AgGDP_{2015}$

(fa)

Annual growth rate of Agriculture value added, in constant US dollars, $tAgGDP_{2016}$

Growth rate of agriculture value added, at constant US dollars, *aAgGDP*

$tAgGDP_{2016}$

(fb)

Agriculture value added in constant US dollars, $AgGDP_{2016}$

2016

$$Max\left[Min\left(10 \times \frac{aAgGDP}{\tau_{4.1i}}, 10 \right), 0 \right]$$

(fc)

I-score$_{4.1i}$

On Track ???

TARGET
$\tau_{4.1i}$ = 6%

2016 Milestone:

$$_{2016}\mu_{4.1i} = \tau_{4.1i} = 6\%$$

(fd)

2016 Benchmark

$$_{2016}B_{4.1i} = \frac{_{2016}\mu_{4.1i} \times 10}{\tau_{4.1i}} = 10$$

(fe)

I-score$_{4.1ii}$| Estimating progress on agriculture growth contribution to the overall poverty reduction target

Baseline Yr	2015
Target Yr	2025

Stand-by for more research

I-score$_{4.1iii}$ | Estimating progress on poverty reduction at national poverty line

Baseline Yr 2015

Target Yr 2025

$most.recent(phrN_t)_{t=2011\rightarrow2015}$

(ff)

Poverty headcount ratio at national poverty lines (% of population), ***phrN$_{2015}$***

2015

Poverty headcount ratio at national poverty lines (% of population), ***phrN$_{2016}$***

2016

$100\times(phrN_{2015}-phrN_{2016})/\ phrN_{2015}$

(fg)

Reduction rate of poverty headcount ratio, at national poverty line, *dpovN*

$$Max\left[\ Min\left(10\times\frac{dpovN}{\tau_{4.1iii}},10\right),0\right]$$

(fh)

I-score$_{4.1iii}$

On Track ???

TARGET
$\tau_{4.1iii}$ = 50%

2016 Milestone:

$$_{2016}\mu_{4.1iii}=\frac{(2016-2015)}{(2025-2015)}\times\tau_{4.1iii}=5\%$$

(fi)

2016 Benchmark

$$_{2016}B_{4.1iii}=\frac{_{2016}\mu_{4.1iii}\times10}{\tau_{4.1iii}}=1.00$$

(fj)

I-score$_{4.1iv}$| Estimating progress on poverty reduction at international poverty line

Baseline Yr 2015

Target Yr 2025

$most.recent(phrI_t)_{t=2011\rightarrow2015}$

(fk)

Poverty headcount ratio at international poverty lines (% of population), ***phrl$_{2015}$***

2015

$100\times(phrI_{2015}-phrI_{2016})/\ phrI_{2015}$

(fl)

Poverty headcount ratio at international poverty lines (% of population), ***phrl$_{2016}$***

2016

Reduction rate of poverty headcount ratio, at international poverty line, *dpovI*

$$Max\left[Min\left(10\times\frac{dpovI}{\tau_{4.1iv}},10\right),0\right]$$

(fm)

I-score$_{4.1iv}$

On Track ???

TARGET
$\tau_{4.1iv}$ = 50%

2016 Milestone:

$$_{2016}\mu_{4.1iv}=\frac{(2016-2015)}{(2025-2015)}\times\tau_{4.1iv}=5\%$$

(fn)

2016 Benchmark

$$_{2016}B_{4.1iv}=\frac{_{2016}\mu_{4.1iv}\times10}{\tau_{4.1iv}}=1.00$$

(fo)

I-score$_{4.1v}$ | Estimating progress on wholesale-farmgate price gap

Baseline Yr 2015

Target Yr 2025

Average weighted farm gate price, *FgP*

2015

$100 \times (WsP - FgP) / WsP$ *(fp)*

Gap between the wholesale price and farmgate price, *Gfgws*$_{2015}$

Average weighted Wholesale/Market Price, *WsP*

$100 \times (Gfgws_{2015} - Gfgws_{2016}) / Gfgws_{2015}$ *(fr)*

Reduction rate of the gap between the wholesale price and farmgate price (in %), *τfgws*

$Max\left[Min\left(10 \times \frac{\tau fgws}{\tau_{4.1v}}, 10 \right), 0 \right]$ *(fs)*

I-score$_{4.1v}$

On Track ???

Average weighted farm gate price, *FgP*

2016

$100 \times (WsP - FgP) / WsP$ *(fq)*

Gap between the wholesale price and farmgate price, *Gfgws*$_{2016}$

Average weighted Wholesale/Market Price, *WsP*

TARGET

$\tau_{4.1v}$ = 50%

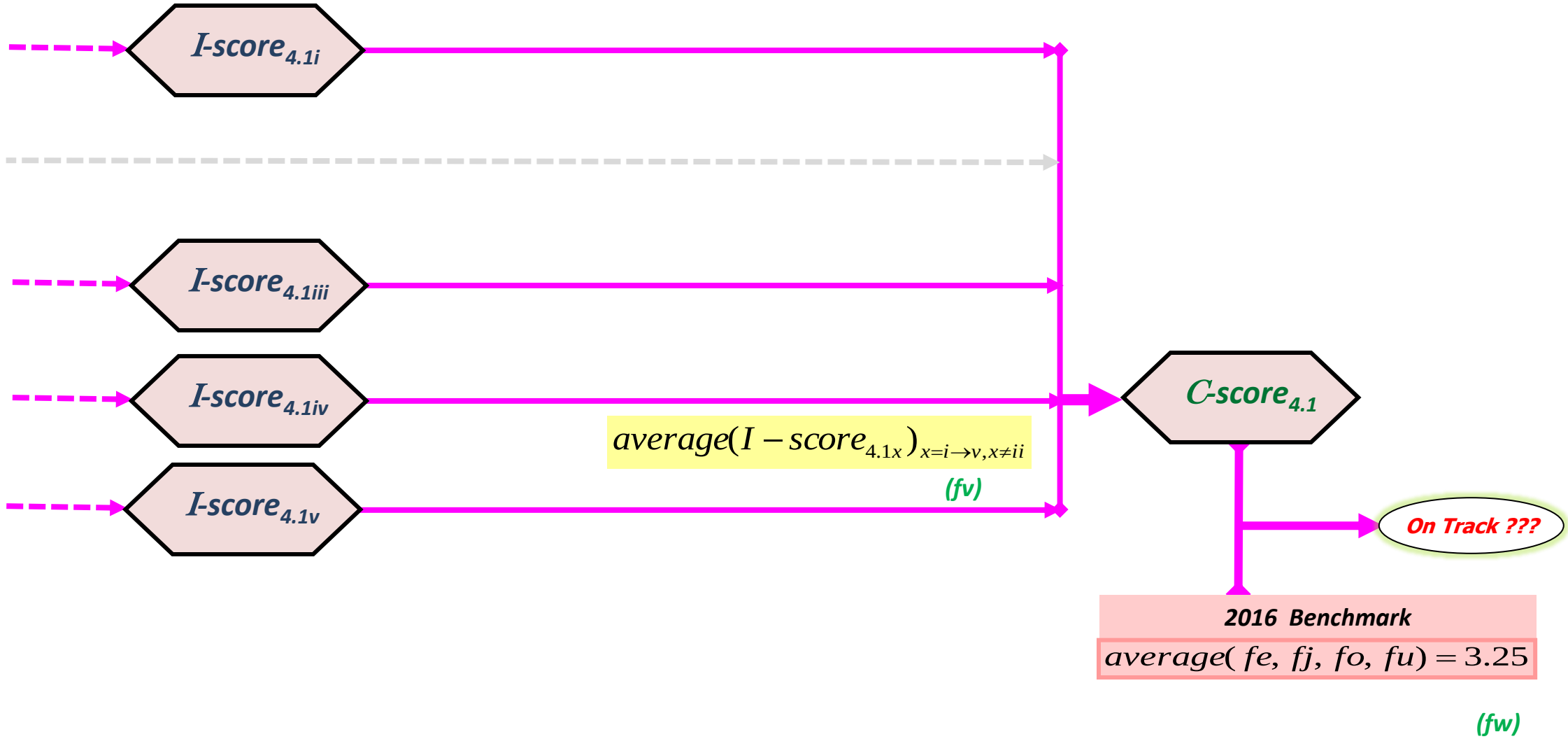
2016 Milestone:

$${}_{2016}\mu_{4.1v} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{4.1v} = 5\%$$ *(ft)*

2016 Benchmark

$${}_{2016}B_{4.1v} = \frac{{}_{2016}\mu_{4.1v} \times 10}{\tau_{4.1v}} = 1.00$$ *(fu)*

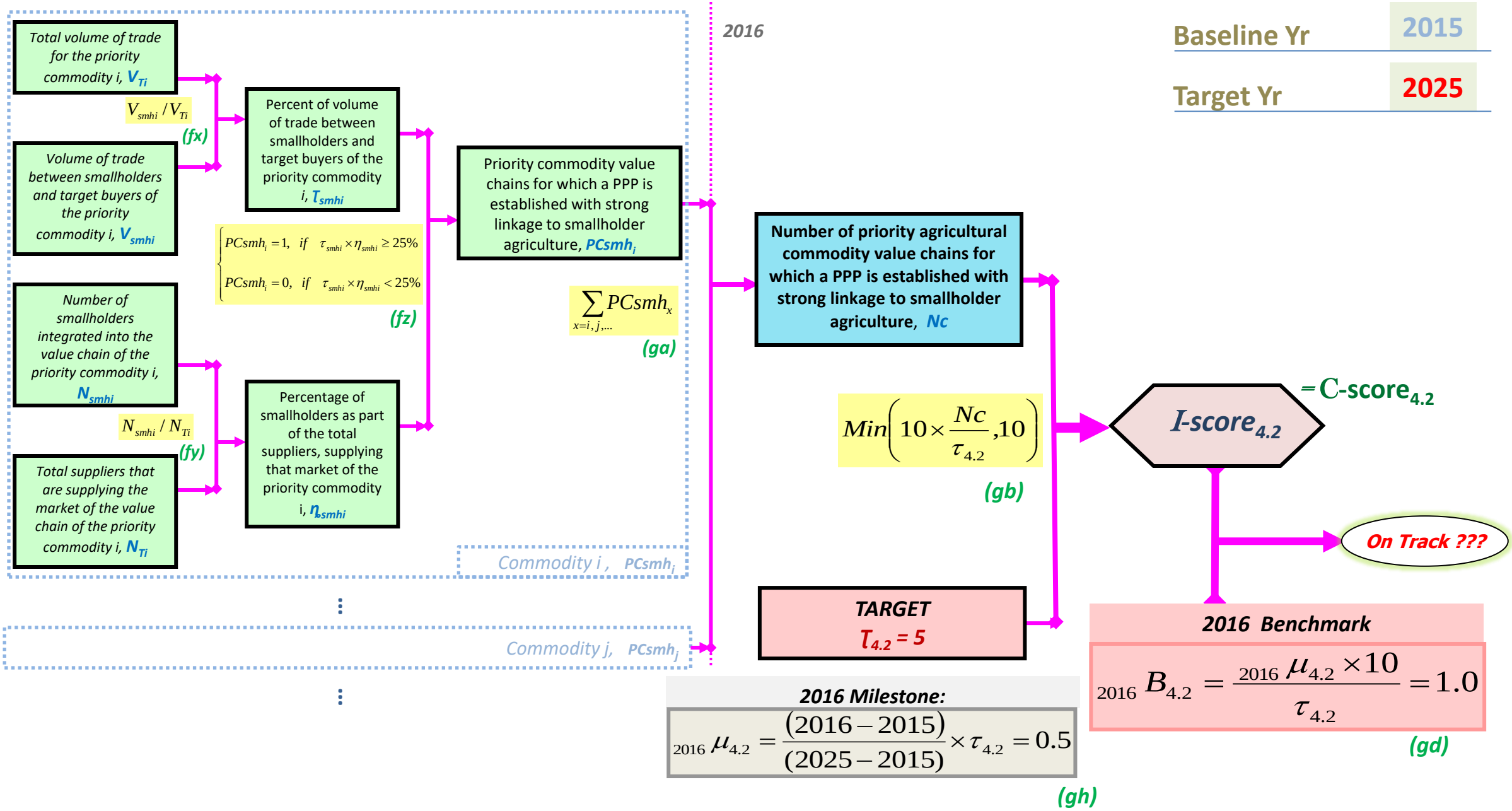
C-score$_{4.1}$ | Combined progress on Agricultural GDP and Poverty Reduction



PC 4.2 | Inclusive PPPs for commodity value chains

4.2- Establish and/or strengthen inclusive public-private partnerships (PPP) for at least five (5) priority agricultural commodity value chains with strong linkage to smallholder agriculture, by 2025.

I-score$_{4.2}$| Estimating progress on priority agricultural commodity value chains that involve smallholder agriculture



PC 4.3 | Youth job in agriculture

4.3- Create job opportunities for at least 30% of the youth in agricultural value chains, by 2025.

I-score$_{4.3}$| Estimating progress on Youth job in agriculture

Baseline Yr 2015

Target Yr 2025

Cumulative number of new jobs for youth, counted from the year 2015.

2016

Total number of youth at working age in the country, TN_{Yth}

Number of youth who do any agriculture related work as paid employees for any agriculture entreprise or SME, $AgN_{yth}E$

2016

Number of youth who work as self-employed in their own business or profession or on their own farm, $AgN_{yth}SE$

$AgN_{yth}E + AgN_{yth}SE + AgN_{yth}FE$ *(ge)*

Number of youth who work 15 hours per week or more as unpaid workers in a family-operated enterprise, $AgN_{yth}FE$

Number of youth that is engaged in new jobs in agricultural value chains, AgN_{Yth}

$100 \times AgN_{yth} / TN_{yth}$ *(gf)*

Percentage of youth that is engaged in new job opportunities in agriculture value chains, τYth

$Min\left(10 \times \frac{\tau Y_{th}}{\tau_{4.3}}, 10\right)$ *(gg)*

TARGET $\tau_{4.3} = 30\%$

2016 Milestone:

$${}_{2016}\mu_{4.3} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{4.3} = 3\%$$

(gh)

$I\text{-score}_{4.3}$ $= C\text{-score}_{4.3}$

On Track ???

2016 Benchmark

$${}_{2016}B_{4.3} = \frac{{}_{2016}\mu_{4.3} \times 10}{\tau_{4.3}} = 1.00$$

(gi)

PC 4.4 | Women participation in Agriculture

4.4- Ensure that 20% of rural women have access to productive assets, including land, credit, inputs and financial services and information (empowered) by 2023.

I-score$_{4.4}$| Estimating progress on Women Empowerment in agriculture

Baseline Yr 2013

Target Yr 2023

2016

Total number of women engaged in agriculture, ***Ntw***, forming a set ***W***

Number of women that have: a*) Input in productive decisions and b) Autonomy in production*, ***NDE$_1$***, forming a set ***DE$_1$***

Number of women that have: *a)Ownership of assets, b)Purchase, sale or transfer of assets, c)Access to and decisions about credit* , ***NDE$_2$***, forming a set ***DE$_2$***

Number of women that have Control over use of income, ***NDE$_3$***, forming a set ***DE$_3$***

Number of women that have: a) Group member and b) Speaking in public , ***NDE$_4$***, forming a set ***DE$_4$***

Number of women that have control over : a) Workload and b) Leisure, ***NDE$_5$***, forming a set ***DE$_5$***

$C_5^4 = \frac{5!}{4!(5-4)!} = 5$ sets in total

$$\sum\left[n\left(DE_i \cap DE_j \cap DE_k \cap DE_l\right)\right]_{i,j,k,l \in \{1,2,3,4,5\}} + n\left(\bigcap_{i \in \{1,2,3,4,5\}} DE_i\right)$$

(gj)

Number of women empowered in agriculture, ***NwE***

Proportion of rural women that are empowered in agriculture, *τWE*

$$100 \times NwE / Ntw$$ *(gk)*

$$Min\left(\frac{\tau WE \times 10}{\tau_{4.4}}; 10\right)$$ *(gl)*

TARGET
$\tau_{4.4}$ = 20%

2016 Milestone:

$$_{2016}\mu_{4.4} = \frac{2016-2013}{2023-2013} \times \tau_{4.4} = 6\%$$ *(gm)*

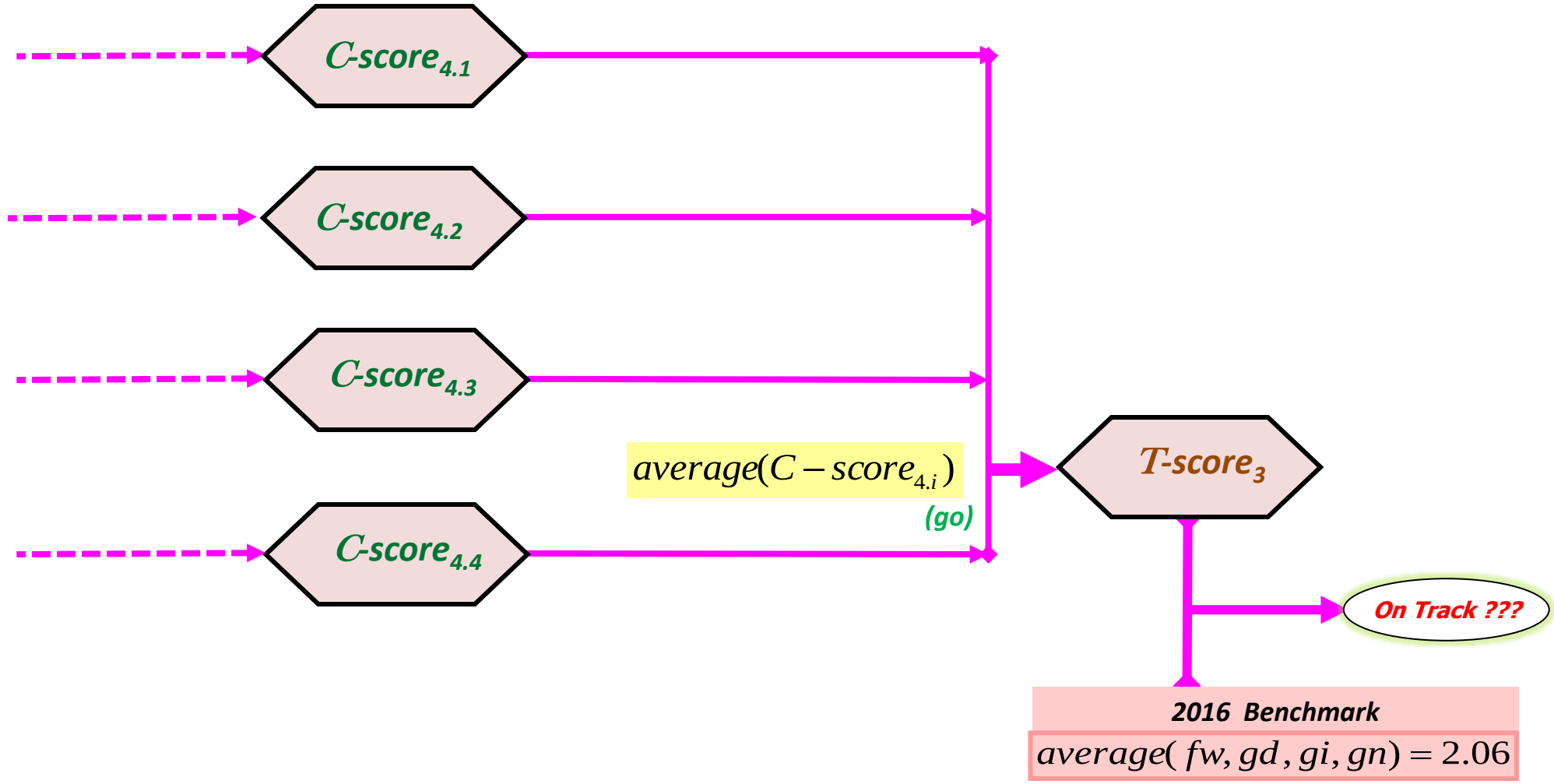
I-score$_{4.4}$ = C-score$_{4.4}$

On Track ???

2016 Benchmark

$$_{2016}B_{4.4} = \frac{_{2016}\mu_{4.4} \times 10}{\tau_{4.4}} = 3.00$$ *(gn)*

$T\text{-score}_4$ | Overall progress for Theme 4: "ERADICATING POVERTY THROUGH AGRICULTURE"



Technical Notes 5

Performance Evaluation for achieving goals under Theme 5 : "INTRA-AFRICAN TRADE IN AGRICULTURE COMMODITIES"

PC 5.1 | Intra-African Trade in agriculture commodities and services

5.1- Triple intra-African trade in agricultural commodities and services, by 2025 from 2015.

I-score$_{5.1}$| Estimating progress on Intra-African Trade for agriculture commodities and services

Baseline Yr 2015

Target Yr 2025

Value of intra- African imports for agriculture goods, ***IAMg***

Value of intra- African imports for agriculture services, ***IAMs***

Value of intra- African exports for agriculture goods, ***IAXg***

Value of intra- African exports for agriculture services, ***IAXs***

2015

Value of intra- African trade (imports and exports) for agriculture goods and services, in constant US dollars 2010, ***IAT$_{2015}$***

$IAMg + IAMs + IAXg + IAXs$

(gq)

$100 \times (IAT_{2016} - IAT_{2015}) / IAT_{2015}$

(gr)

Value of intra- African imports for agriculture goods, ***IAMg***

Value of intra- African imports for agriculture services, ***IAMs***

Value of intra- African exports for agriculture goods, ***IAXg***

Value of intra- African exports for agriculture services, ***IAXs***

2016

Value of intra- African trade (imports and exports) for agriculture goods and services, in constant US dollars 2010, ***IAT$_{2016}$***

$IAMg + IAMs + IAXg + IAXs$

(gs)

Growth rate of the value of trade of agricultural commodities and services within Africa, in constant US dollars (in %), *τIAT*

$$Max\left[Min\left(10 \times \frac{\tau IAT}{\tau_{5.1}}, 10 \right), 0 \right]$$

(gt)

TARGET

$T_{5.1}$ = 200%

2016 Milestone:

$$_{2016}\mu_{5.1} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{5.1} = 20\%$$

(gu)

I-score$_{5.1}$ = C-score$_{5.1}$

On Track ???

2016 Benchmark

$$_{2016}B_{5.1} = \frac{_{2016}\mu_{5.1} \times 10}{\tau_{5.1}} = 1.00$$

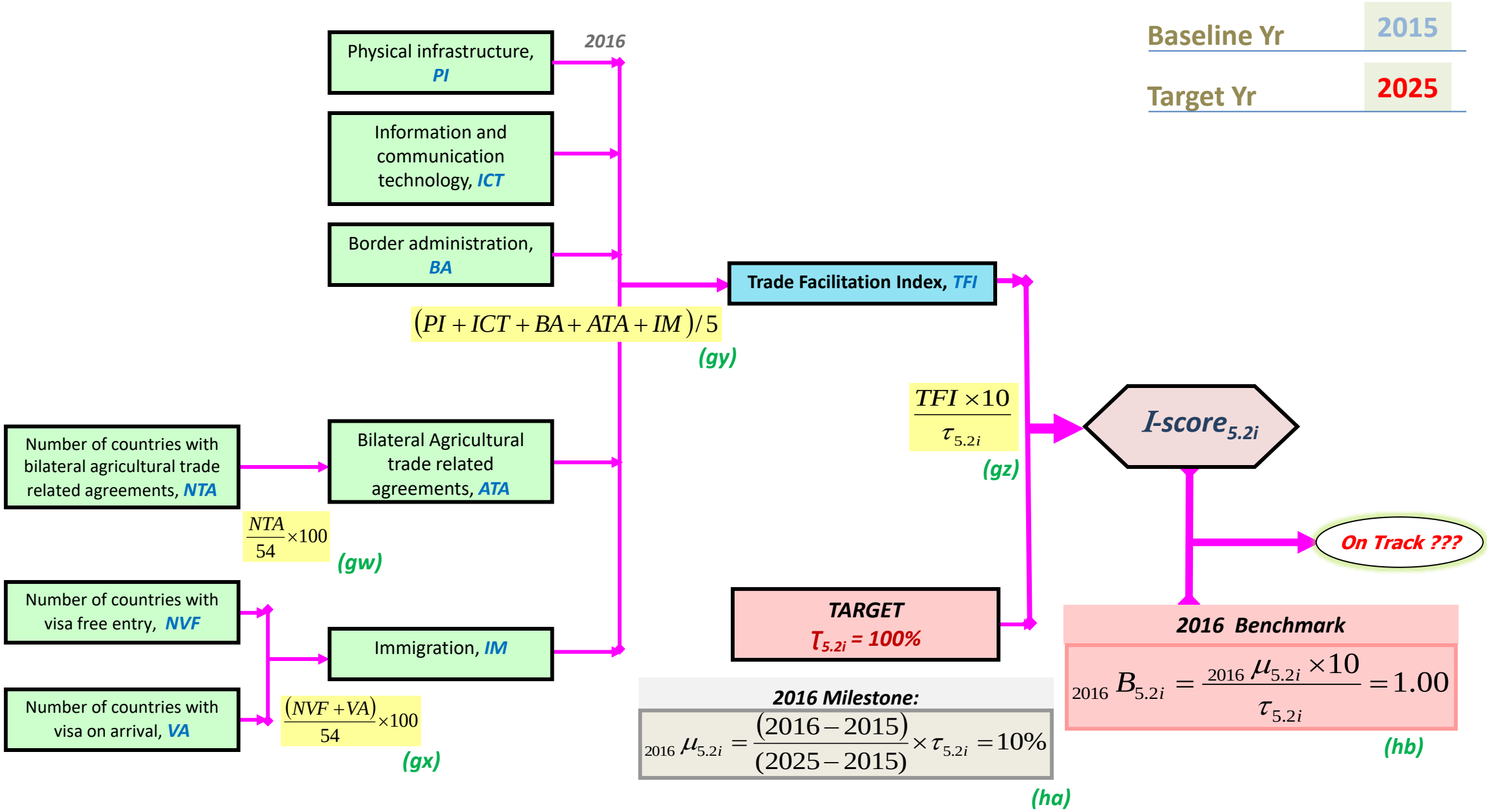
(gv)

PC 5.2 | Intra-African Trade Policies and institutional conditions

5.2i- Fully establish trade facilitation measures by reaching 100% of Trade Facilitation Index by 2025.

5.2ii- Reduce the Domestic Food Price Volatility Index to less than 7.5% by 2025.

I-score$_{5.2i}$| Estimating progress on Trade Facilitation



I-score$_{5.2ii}$| Estimating progress on Domestic Food Price Volatility

Baseline Yr 2015

Target Yr 2025

2015

Domestic Food Price Volatility Index, CV_0

2016

Domestic Food Price Volatility Index, *CV*

$$\begin{cases} \left[\max\left(\min\left(\frac{(CV_0 - CV)}{(CV_0 - \tau_{5.2ii})} \times 10, 10\right), 0\right)\right]_{CV_0 > \tau_{5.2ii}} \\ [10]_{CV_0 \le \tau_{5.2ii}\,(and)\;\; CV \le \tau_{5.2ii}} \\ [0]_{CV_0 \le \tau_{5.2ii}\,(and)\;\; CV > \tau_{5.2ii}} \end{cases} \quad (hc)$$

I-score$_{5.2ii}$

On Track ???

TARGET
$\tau_{5.2ii}$ = 7.5%

2016 Benchmark

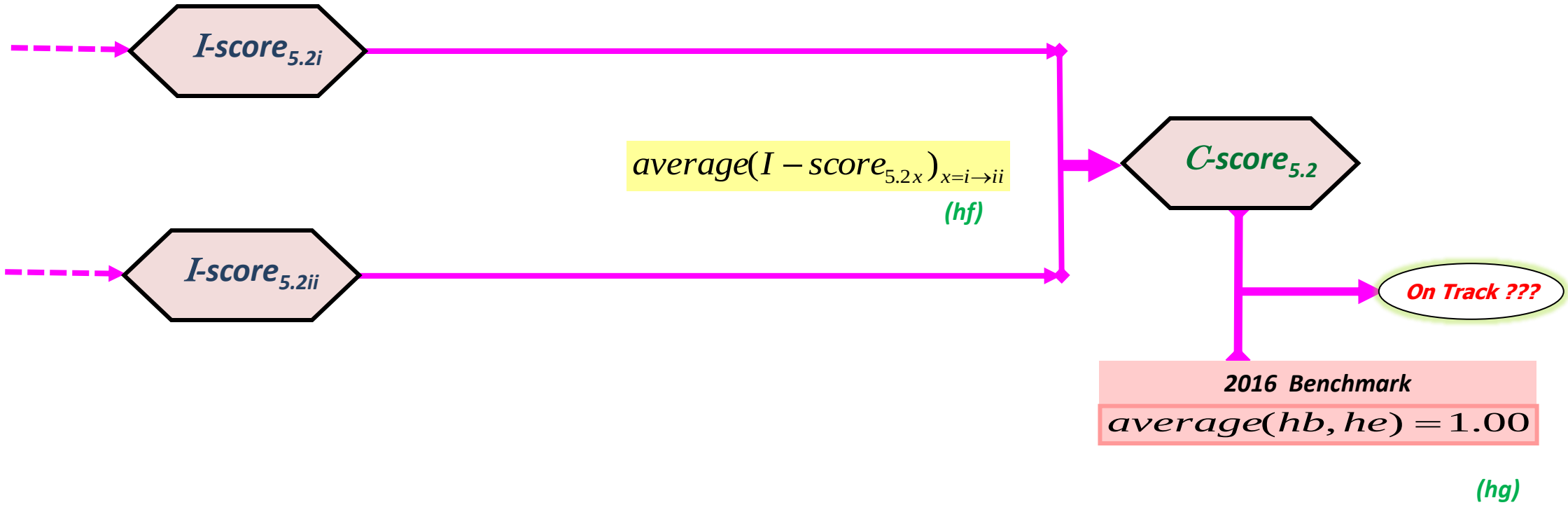
$$_{2016}B_{5.2ii} = \frac{CV_0 - {}_{2016}\mu_{5.2ii}}{CV_0 - \tau_{5.2ii}} \times 10 = 1.00 \quad (he)$$

2016 Milestone:

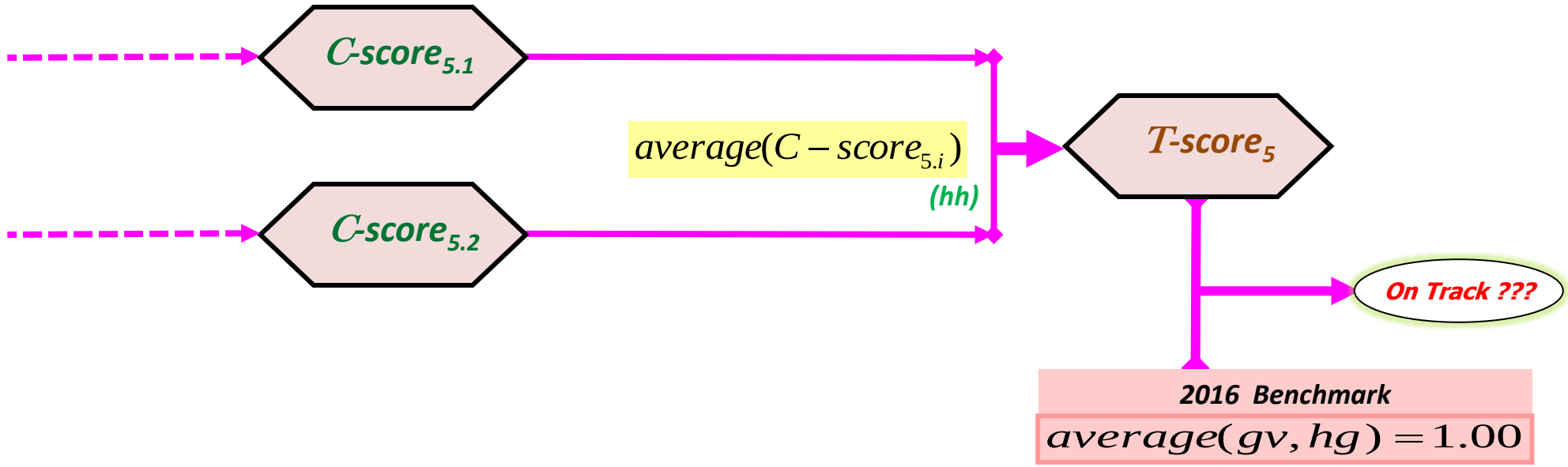
$$\begin{cases} \left[{}_{2016}\mu_{5.2ii} = CV_0 - \frac{(2016-2015)}{(2025-2015)} \times (CV_0 - \tau_{5.2ii})\right]_{CV_0 > \tau_{5.2ii}} \\ [\tau_{5.2ii}]_{CV_0 \le \tau_{5.2ii}} \end{cases} \quad (hd)$$

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

C-score$_{5.2}$ | Combined progress on Intra-African Trade Policies and institutional conditions



$T\text{-score}_5$ | Overall progress for Theme 5: "INTRA-AFRICAN TRADE IN AGRICULTURE COMMODITIES"



Technical Notes 6

Performance Evaluation for achieving goals under Theme 6 : "RESILIENCE TO CLIMATE VARIABILITY"

PC 6.1 | Resilience to climate related risks

6.1i- Ensure that at least 30% of farm, pastoral, and fisher households are resilient to climate and weather related risks, by 2025.

6.1ii- Ensure that at least 30% of agricultural land is placed under sustainable land management practice by 2023 from 2013.

I-score$_{6.1i}$| Estimating progress on households resilience to climate and weather related risks

Baseline Yr 2015

Target Yr 2025

Total number of farm, pastoral, and fisher households, ***NagHh***

2016

Number of farm, pastoral, and fisher households that are resilient to climate variability and related risks, ***NRagHh***

$100 \times NRagHh / NagHh$

(hj)

Percentage of farm, pastoral, and fisher households that are resilient to climate and weather related shocks (in %), ***τRAgHh***

$\frac{\tau RagHh \times 10}{\tau_{6.1i}}$

(hk)

I-score$_{6.1i}$

On Track ???

TARGET
$\tau_{6.1i}$ = 30%

2016 Milestone:

$$_{2016}\mu_{6.1i} = \frac{(2016-2015)}{(2025-2015)} \times \tau_{6.1i} = 3\%$$

(hl)

2016 Benchmark

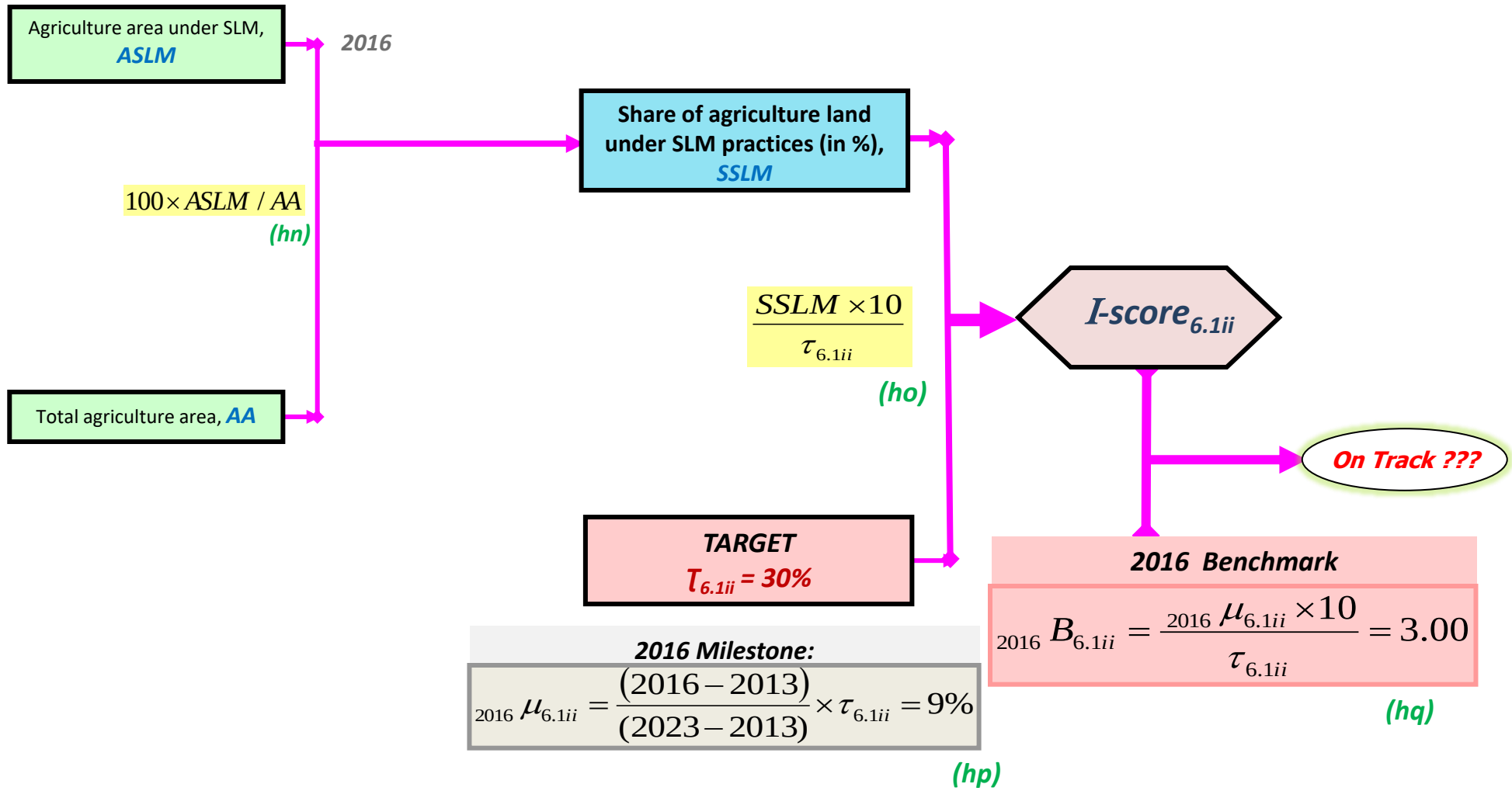
$$_{2016}B_{6.1i} = \frac{_{2016}\mu_{6.1i} \times 10}{\tau_{6.1i}} = 1.00$$

(hm)

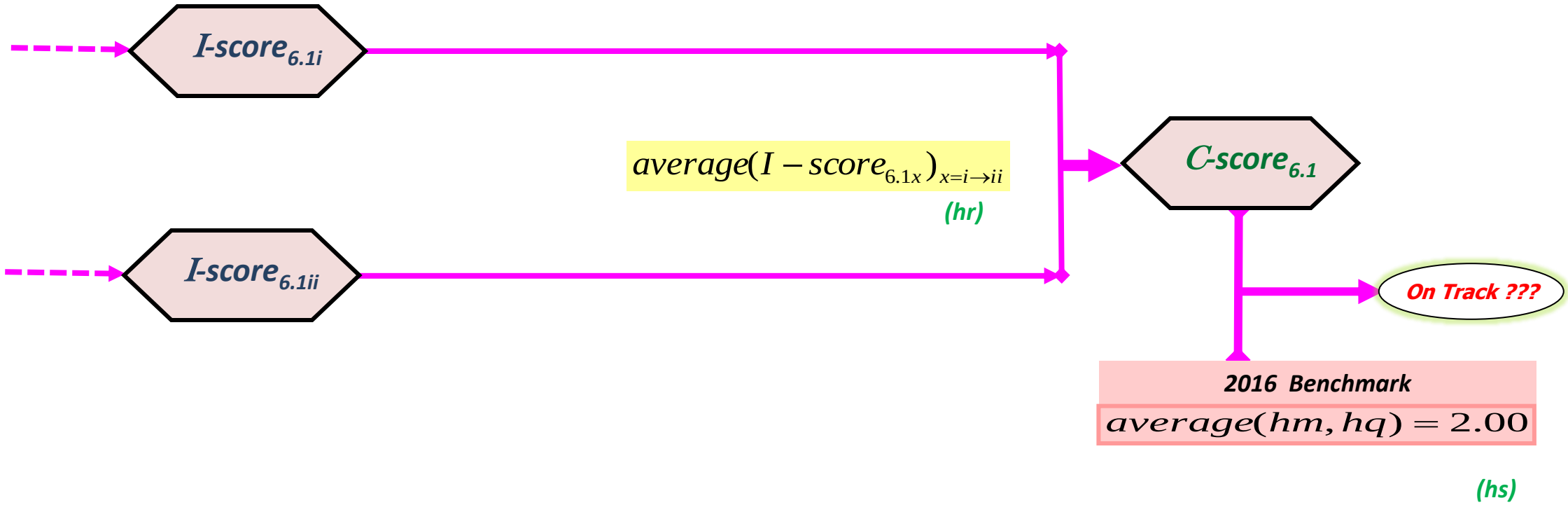
I-score$_{6.1ii}$| Estimating progress on sustainable land management

Baseline Yr 2013

Target Yr 2023



C-score$_{6.1}$ | Combined progress on Resilience to climate related risks



PC 6.2 | Investment in resilience building

6.2- Create permanent investment budget-lines to respond to spending needs on resilience building initiatives, especially for disaster preparedness plans, functioning early warning and response systems, social safety nets, and weather-based index insurance, from 2015 to 2025.

I-score$_{6.2}$| Estimating progress on availability of budget lines on resilience building

Baseline Yr	2015
Target Yr	2025

Existence of government budget-lines on disaster preparedness policy and strategy, EI_{RB1}

Existence of government budget-lines on Early warning and response systems and social safety nets, EI_{RB2}

Number (proportion) of households covered by index insurance, EI_{RB3}

2016

$average(EI_{RBi})_{i=1,2,3}$ *(hu)*

Existence of government budget-lines to respond to spending needs on resilience building initiatives (in %), EI_{RB}

Total number of households, Z

Number of households covered by weather based index insurance schemes, z

$100 \times z / Z$ *(ht)*

$\frac{EI_{RB} \times 10}{\tau_{6.2}}$ *(hv)*

TARGET
$T_{6.2} = 100\%$

$I\text{-score}_{6.2}$ = C-score$_{6.2}$

On Track ???

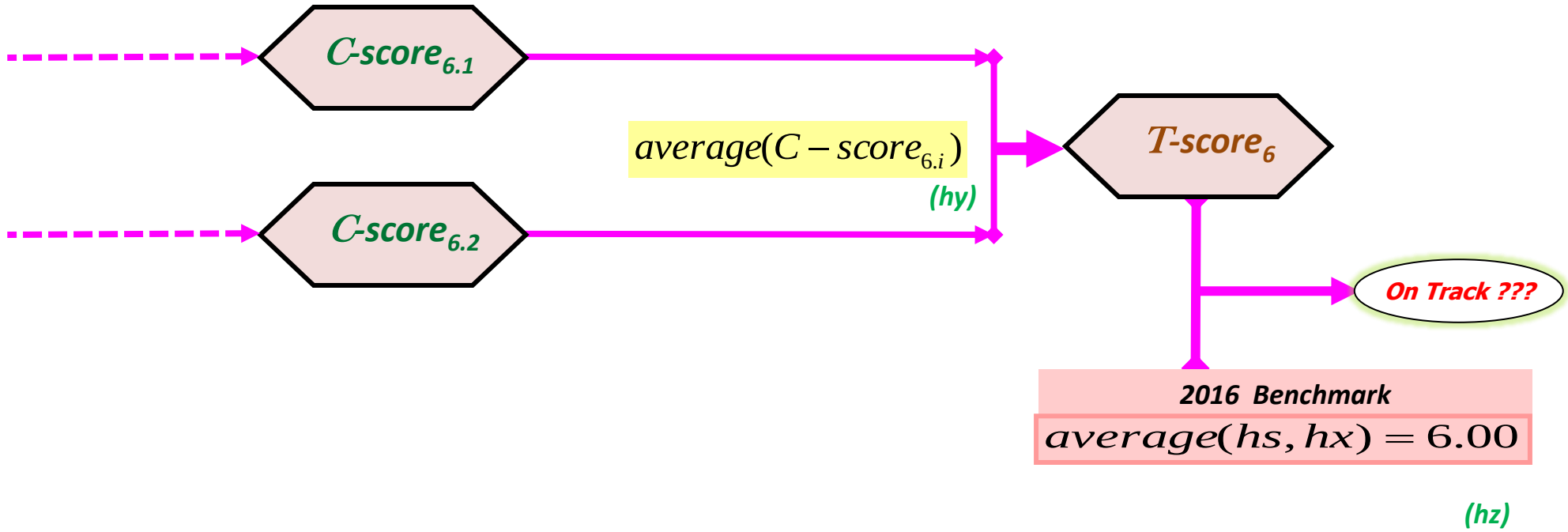
2016 Milestone:

$$_{2016}\mu_{6.2} = \tau_{6.2} = 100\%$$ *(hw)*

2016 Benchmark

$$_{2016}B_{6.2} = \frac{_{2016}\mu_{6.2} \times 10}{\tau_{6.2}} = 10$$ *(hx)*

$T\text{-score}_6$ | Overall progress for Theme 6: "RESILIENCE TO CLIMATE VARIABILITY"



Technical Notes 7

Performance Evaluation for achieving goals under Theme 7 : "MUTUAL ACCOUNTABILITY FOR ACTIONS AND RESULTS"

PC 7.1 | Country capacity for evidence based planning, implementation and M&E

7.1- Reach at least 63 for the Index of capacity to generate and use agriculture statistical data and information (ASCI), by 2025. 2015.

I-score$_{7.1}$| Estimating progress on the country capacity to generate and use agriculture statistical data

Baseline Yr 2015

Target Yr 2025

Index of capacity to generate and use agriculture statistical data and information, $ASCI_0$ — *2015*

Index of capacity to generate and use agriculture statistical data and information, *ASCI* — *2016*

$$\begin{cases} \left[\max\left(\min\left(\frac{(ASCI - ASCI_0)}{(\tau_{7.1} - ASCI_0)} \times 10, 10\right), 0\right)\right]_{ASCI_0 < \tau_{7.1}} \\ [10]_{ASCI_0 \geq \tau_{7.1}(and)\ ASCI \geq \tau_{7.1}} \\ [0]_{ASCI_0 \geq \tau_{7.1}(and)\ ASCI < \tau_{7.1}} \end{cases} \quad (ia)$$

I-score$_{7.1}$ = C-score$_{7.1}$

On Track ???

TARGET
$T_{7.1}$ = 63

2016 Benchmark

$$_{2016}B_{7.1} = \frac{_{2016}\mu_{7.1} - ASCI_0}{\tau_{7.1} - ASCI_0} \times 10 = 1.00 \quad (ic)$$

2016 Milestone:

$$\begin{cases} \left[{}_{2016}\mu_{7.1} = ASCI_0 + \frac{(2016 - 2015)}{(2025 - 2015)} \times (\tau_{7.1} - ASCI_0)\right]_{ASCI_0 < \tau_{7.1}} \\ [\tau_{7.1}]_{ASCI_0 \geq \tau_{7.1}} \end{cases} \quad (ib)$$

This is a relative milestone which is specific to each country as it depends on where the country is coming from: the 2015 baseline value …

PC 7.2 | Peer Review and Mutual Accountability

7.2- Foster alignment, harmonization and coordination among multi-sectorial efforts and multi-institutional platforms for peer review, mutual learning and mutual accountability, (reach 100% for the Existence of inclusive institutionalized mechanisms and platforms for mutual accountability and peer review, ECI) by 2018.

I-score$_{7.2}$| Estimating progress on Peer Review and Mutual Accountability

Baseline Yr 2015

Target Yr 2018

Number of mutual accountability principles satisfied by the country, ***MAPS***

$100 \times MAPS / 6$ *(id)*

Adherence to mutual accountability principles (%), ***AMAP***

$(EMAP + AMAP + CARR)/3$ *(ig)*

Number of best practices satisfied by the country, ***BPS***

$100 \times BPS / 12$ *(ie)*

Existence of mutual accountability mechanism and platform (%), ***EMAP***

Number of key areas covered by the country's review report, ***NKAA***

$100 \times NKAA / 6$ *(if)*

Coverage of agricultural review report, ***CARR***

2016

Existence of inclusive institutionalized mechanisms for mutual accountability and peer review *ECI*

$\frac{ECI \times 10}{\tau_{7.2}}$ *(ih)*

TARGET
$T_{7.2}$ = 100%

2016 Milestone:

$$_{2016}\mu_{7.2} = \frac{(2016-2015)}{(2018-2015)} \times \tau_{7.2} = 33\%$$ *(ii)*

I-score$_{7.2}$ = C-score$_{7.2}$

On Track ???

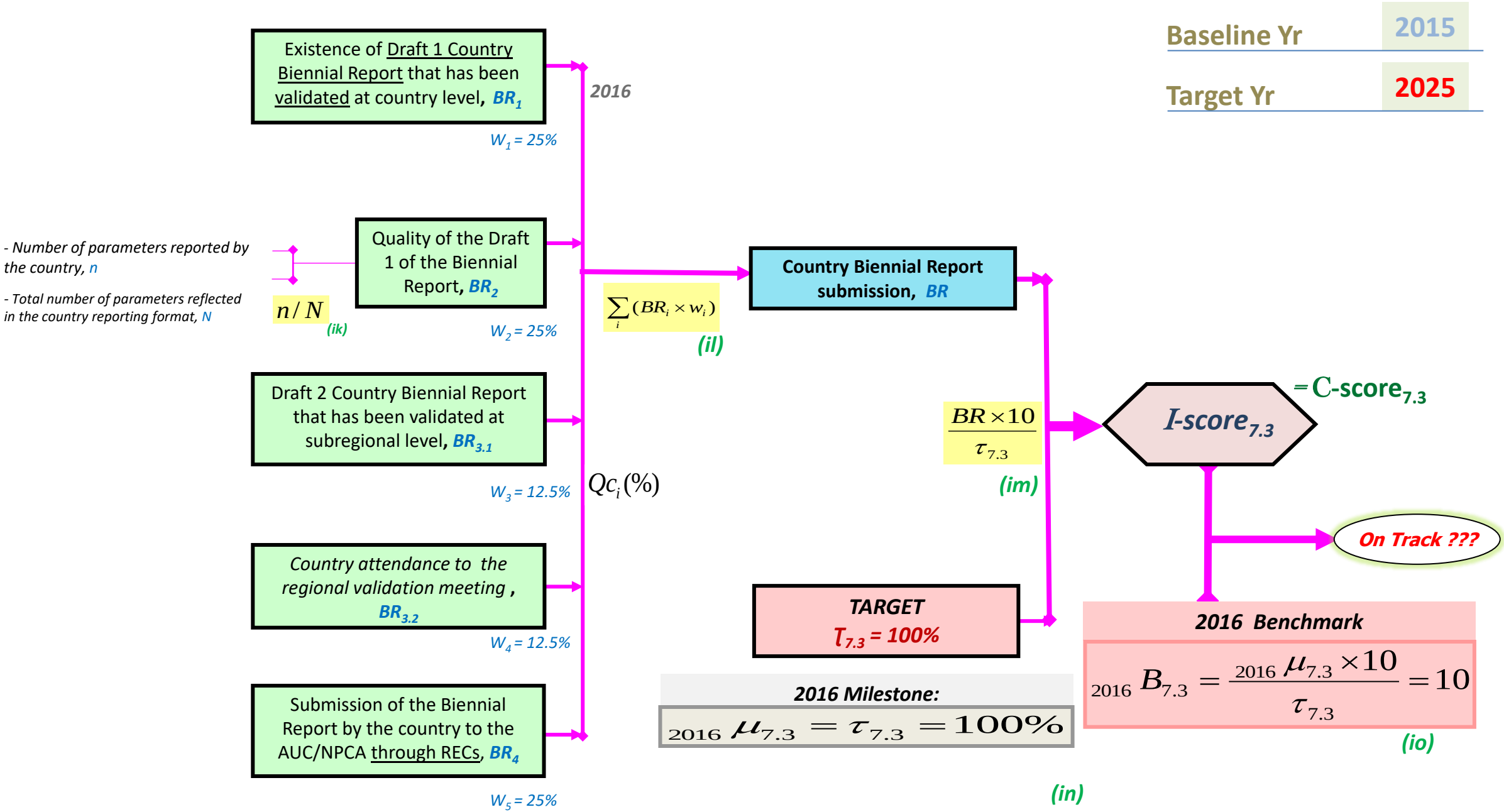
2016 Benchmark

$$_{2016}B_{7.2} = \frac{_{2016}\mu_{7.2} \times 10}{\tau_{7.2}} = 3.33$$ *(ij)*

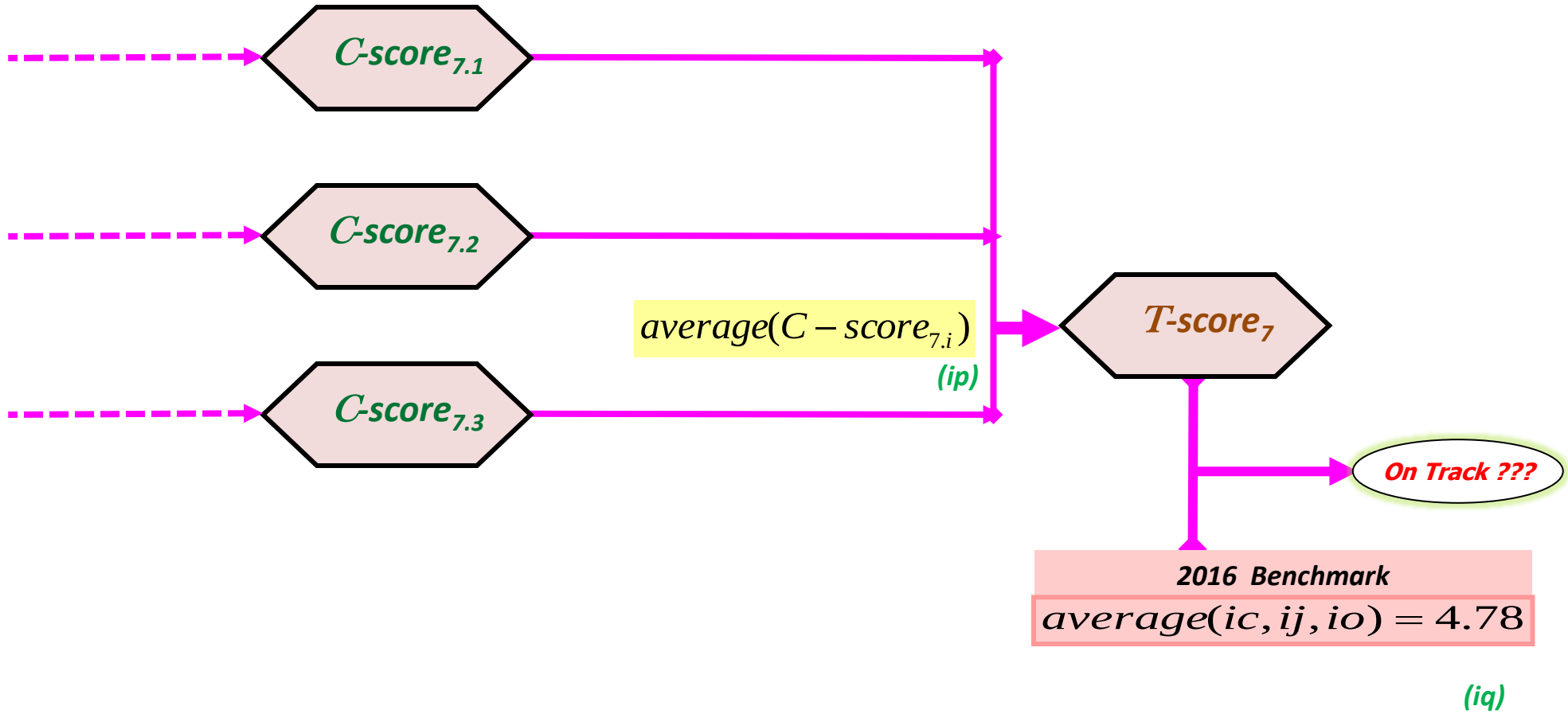
PC 7.3 Biennial Agriculture Review Process

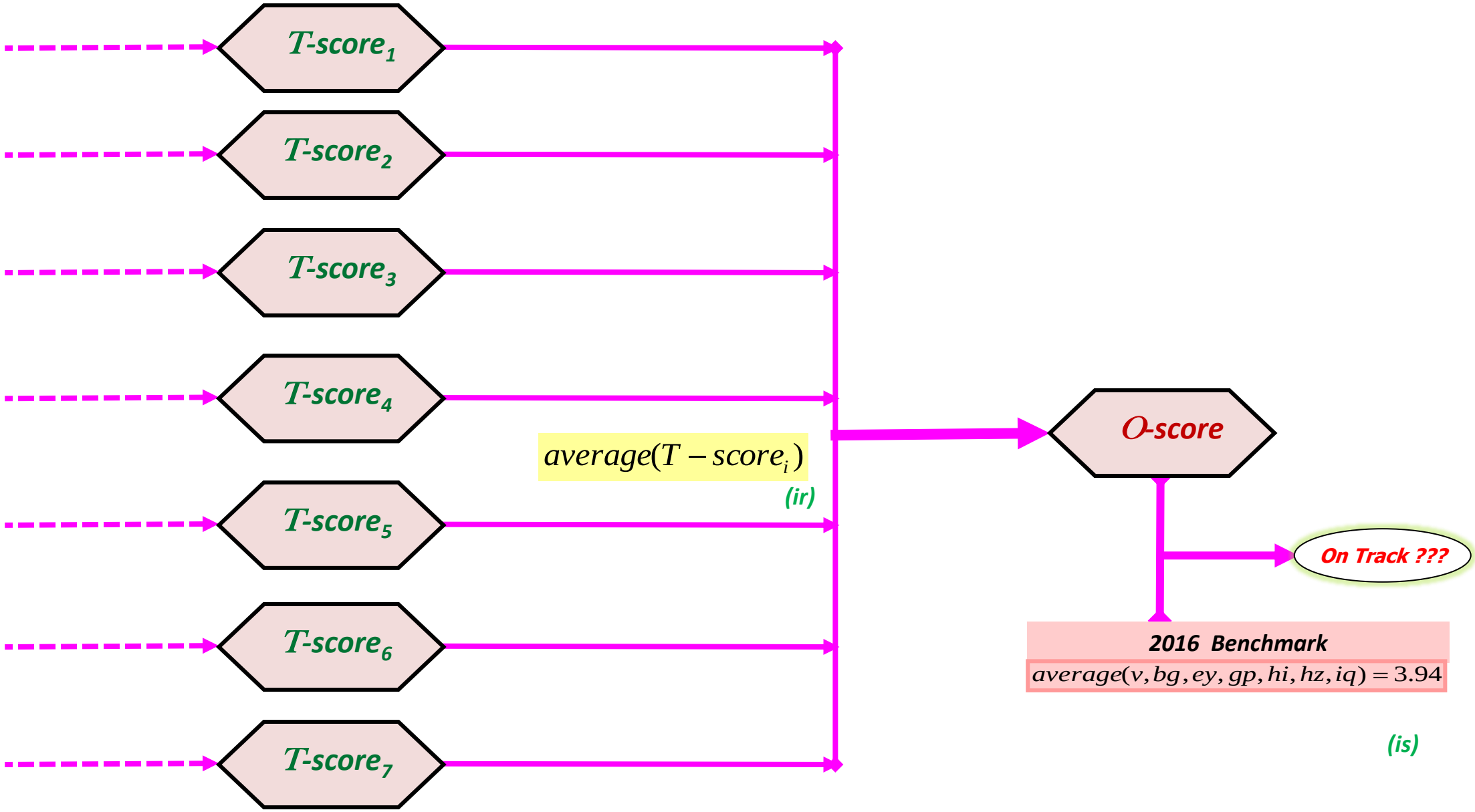
7.3- Conduct a biennial Agriculture Review Process that involves tracking, monitoring and reporting progress made in implementing the Malabo Declaration, by availing the regular country Biennial Report to the AU Assembly.

I-score$_{7.3}$ | Estimating progress on availing the regular country Biennial Report for the AU Assembly



T-score$_7$ | Overall progress for Theme 7: "MUTUAL ACCOUNTABILITY FOR ACTIONS AND RESULTS"




T-score1
T-score2
T-score3
T-score4
T-score5
T-score6
T-score7
average(T − score_i)
(ir)
O-score
On Track ???
2016 Benchmark
average(v, bg, ey, gp, hi, hz, iq) = 3.94
(is)

The 2017 Benchmark Scorecard

on Country performances in implementing Malabo Declaration for agricultural transformation in Africa...

... minimum scores to be on track in 2017 for meeting targets set for each of the 7 commitments of the Malabo Declaration.

Temporary Structure of the Country Scorecard proposed @ the Experts Group Reflection Meeting on Scorecard held on 3rd-5th August 2016 in Nairobi, Kenya.

2017 Country Scorecard for implementing Malabo Declaration

Country Name	Benchmark

Theme (T) Performance				Category (C) Performance			
No.	*Item*	*T-score*	*T-progress*	*No.*	*Item*	*C-score*	*C-Progress*
1	Re-commitment to CAADP Process	3.33	*On track*	PC 1.1	National CAADP Process	3.33	*On track*
				PC 1.2	CAADP based Cooperation, Partnership & Alliance	3.33	*On track*
				PC 1.3	CAADP based Policy & Institutional Review/ Setting/ Support	3.33	*On track*
2	Investment Finance in Agriculture	6.67	*On track*	PC 2.1	Public Expenditures to Agriculture	10.00	*On track*
				PC 2.2	Domestic Private Sector Investment in Agriculture, Agribusiness, Agro-Ind.	-	*silent*
				PC 2.3	Domestic Private Sector Investment in Agriculture, Agribusiness, Agro-Ind.	-	*silent*
				PC 2.4	Access to finance	3.33	*On track*
3	Ending Hunger	3.71	*On track*	PC 3.1	Access to Agriculture inputs and technologies	5.53	*On track*
				PC 3.2	Agricultural Productivity	1.00	*On track*
				PC 3.3	Post-Harvest Loss	1.00	*On track*
				PC 3.4	Social Protection	10.00	*On track*
				PC 3.5	Food security and Nutrition	1.00	*On track*
4	Eradicating Poverty through Agriculture	2.06	*On track*	PC 4.1	Agricultural GDP for Poverty Reduction	3.25	*On track*
				PC 4.2	Inclusive PPPs for commodity value chains	1.00	*On track*
				PC 4.3	Youth job in agriculture	1.00	*On track*
				PC 4.4	Women participation in Agri-business	3.00	*On track*
5	Intra-African Trade in Agriculture Commodities	1.00	*On track*	PC 5.1	Intra-African Trade in agriculture commodities and services	1.00	*On track*
				PC 5.2	Intra-African Trade Policies and institutional conditions	1.00	*On track*
6	Resilience to Climate Variability	6.00	*On track*	PC 6.1	Resilience to climate related risks	2.00	*On track*
				PC 6.2	Investment in resilience building	10.00	*On track*
7	Mutual Accountability for Actions and Results	4.78	*On track*	PC 7.1	Country capacity for evidence based planning, impl. and M&E	1.00	*On track*
				PC 7.2	Peer Review and Mutual Accountability	3.33	*On track*
				PC 7.3	Biennial Agriculture Review Process	10.00	*On track*
Overall Score		3.9		*Overall progress*		*On track*	

African Union Commission, Headquarters, Addis Ababa, Ethiopia
Department of Rural Economy and Agriculture (DREA),
Comprehensive African Agriculture Development Programme (CAADP)
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