

# Framework on Estimating Expected Benefits through Facilitating the Nagoya Protocol on Access and Benefit-Sharing: Interim Report – An Attempt of Estimation of Non-Monetary Benefits

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**科研費**  
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**Clarifying Benefits**

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## **Clarifying Benefits**

## Why further clarification?



Estimations above are suggestive.

However...



- Benefits above are annual benefits of one activity.
- Effects of the activities sustain for several years.
- A number of activities are simultaneously possible.



It is worth clarifying the benefits by different scenarios.



Scenarios	Conditions for Clarifying Benefits
Scenario A	Non-monetary benefits for a low income country such as country A
Scenario B	Non-monetary benefits for a low income country such as country B
Scenario C	Non-monetary benefits as a merger of those for both countries A and B
Scenario D	Non-monetary benefits if the number of ABS related activities increase by the introduction of the Nagoya Protocol
Scenario E	Non-monetary benefits for a user country by decrease in transaction costs

Here, a brief lecture on net present value (NPV)...



Today's \$100 is not equal to \$100 10 years later.

\$100 10 years later must be discounted from the viewpoint of today's value.

=

Net Present Value

NPV					
Benefit = Revenue = \$100					
Discount rate = 10% = 0.1			0.1		
Time	0	1	2	...	10
Benefit	100	100	100		100
Discount rate	0.1	0.1	0.1		0.1
Discounting	$100 / ((1+0.1)^0)$	$100 / ((1+0.1)^1)$	$100 / ((1+0.1)^2)$		$100 / ((1+0.1)^{10})$
Net Present Value (NPV)	100.00	90.91	82.64		38.55
Net Present Value (NPV)	312.11				
Just a total					

Hence, the total benefits of activities for 10 years  
is NOT  $100 \times 10 = 1,000$   
but is = 312.



## Scenario A

### Scenario A

#### Non-monetary benefits for a low income country such as country A


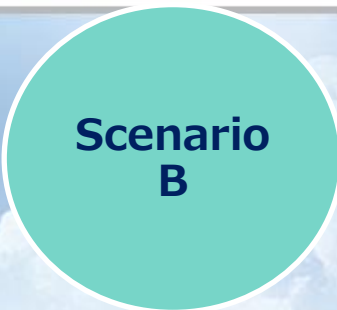
■ This should be emphasised that **benefits can be generated for years.**

■ If simply suppose that benefits continues to be generated **for 10 years** (this is absolutely assumption but does not change the essence of the analysis, even if it continues for 5 year or 20 years) ,

■ Net present value (**NPV**) of the benefits by one ABS related activity in 10 years with discount rate 10% is:

**NPV in 10 years:           US\$2,321,467**

**Annual benefits:           US\$377,808**



## Scenario B

### Scenario B

#### Non-monetary benefits for a low income country such as country B

- The same scenario for country B.
- This should be emphasised that **benefits can be generated for years.**
- If simply suppose that benefits continues to be generated **for 10 years** (this is absolutely assumption but does not change the essence of the analysis, even if it continues for 5 year or 20 years) .
- Net present value (**NPV**) of the benefits by one ABS related activity in 10 years with discount rate 10% is:

<b>NPV in 10 years:</b>	<b>US\$ 1,447,365</b>
<b>Annual benefits:</b>	<b>US\$ 235,552</b>





## Scenario C

### **Scenario C** **Non-monetary benefits** **as a merger of those for both countries A and B**

- It is possible **to carry out two activities simultaneously** in one country,
- “Mushrooms activity” and “medicinal plants activity” as two cases are carried out simultaneously in ONE country
- The benefits for the country can simply be re-written as shown below.

<b>NPV in 10 years:</b>	<b>US\$3,768,832</b>
<b>Annual benefits:</b>	<b>US\$613,360</b>





## Scenario D

### Scenario D

**Non-monetary benefits if the number of ABS related activities increase by the introduction of the Nagoya Protocol**

- The number of ABS activities will **NOT automatically increase** by the introduction of the Nagoya Protocol.
- On the other hand, well-organised laws and/or institutions responded to the protocol **are able to make processes of ABS more efficient.**
- When the latter, the number of ABS is expected to increase.
- Simply suppose that the number of the cases will increase to **100**. For the scenario on, the figure that benefits of scenario C is multiplied by 50.

<b>NPV in 10 years:</b>	<b>US\$188,441,584</b>
<b>Annual benefits:</b>	<b>US\$30,668,000</b>



## Scenario E

### Scenario E

### Non-monetary benefits for user country by decrease in transaction costs

- A different view. Transaction cost(s) when ABS.
- Case A; A transaction cost; A business trip for ABS negotiation; US\$4,000 and 12 times in 4 years.
- US\$50,000 was approximately needed for negotiation.
- Well-organised laws/institutions are able to make processes of ABS more efficient; Transaction costs decrease.
- There is no criterion at all but if simply it is supposed that the times of negotiation halved.

**Benefit/Transaction cost saved:** **US\$25,000**

※ This point is planned to be simulated by further research.

# Summary of Benefits by Scenarios



Scenarios	Conditions for Calculating Benefits	NPV in 10 years in US\$	Annual Benefits in US\$
Scenario A	Non-monetary benefits for low income country such as country A	2,321,467	377,808
Scenario B	Non-monetary benefits for low income country such as country B	1,447,365	235,552
Scenario C	Non-monetary benefits as a merger of those for both countries A and B	3,768,832	613,360
Scenario D	Non-monetary benefits if the number of ABS related activities increase by the introduction of the Nagoya Protocol	188,441,584	30,668,000
Scenario E	Non-monetary benefits for user country by decrease in transaction costs	US\$25,000*	-

\* This figure is not NPV.

Before finishing the presentations...



Further Research



- Design of a hypothetical case and simulation of country C
- Consideration of effects of exports
- Effects of Transaction costs saved on ripple effect
- Analysis on the relationship between ABS related activities and biodiversity conservation

Presentations from us stop here.  
Questions and comments are welcome.

A hand is shown clapping against a bright blue sky filled with fluffy white clouds. Several colorful pinwheels (red, green, blue) are scattered across the sky, some appearing to be in motion. The text "Thank You !" is overlaid in a large, blue, 3D-style font with a white outline.

# Thank You !

