



**Regional Training Workshop on
“The Economic Valuation of The Goods and Services of Coastal Habitats”**

**ECONOMIC VALUATION
FOR
ENVIRONMENTAL GOODS AND SERVICES
(MARKET PRICE METHOD)**

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BANGKOK, THAILAND**

WITH

**SOUTH CHINA SEA PROJECT: “REVERSING THE ENVIRONMENTAL DEGRADATION TRENDS OF
THE SOUTH CHINA SEA AND THE GULF OF THAILAND”**

**UNITED NATIONS PROGRAMME AND GENERAL ENVIRONMENTAL FACILITIES
UNITED NATIONS**

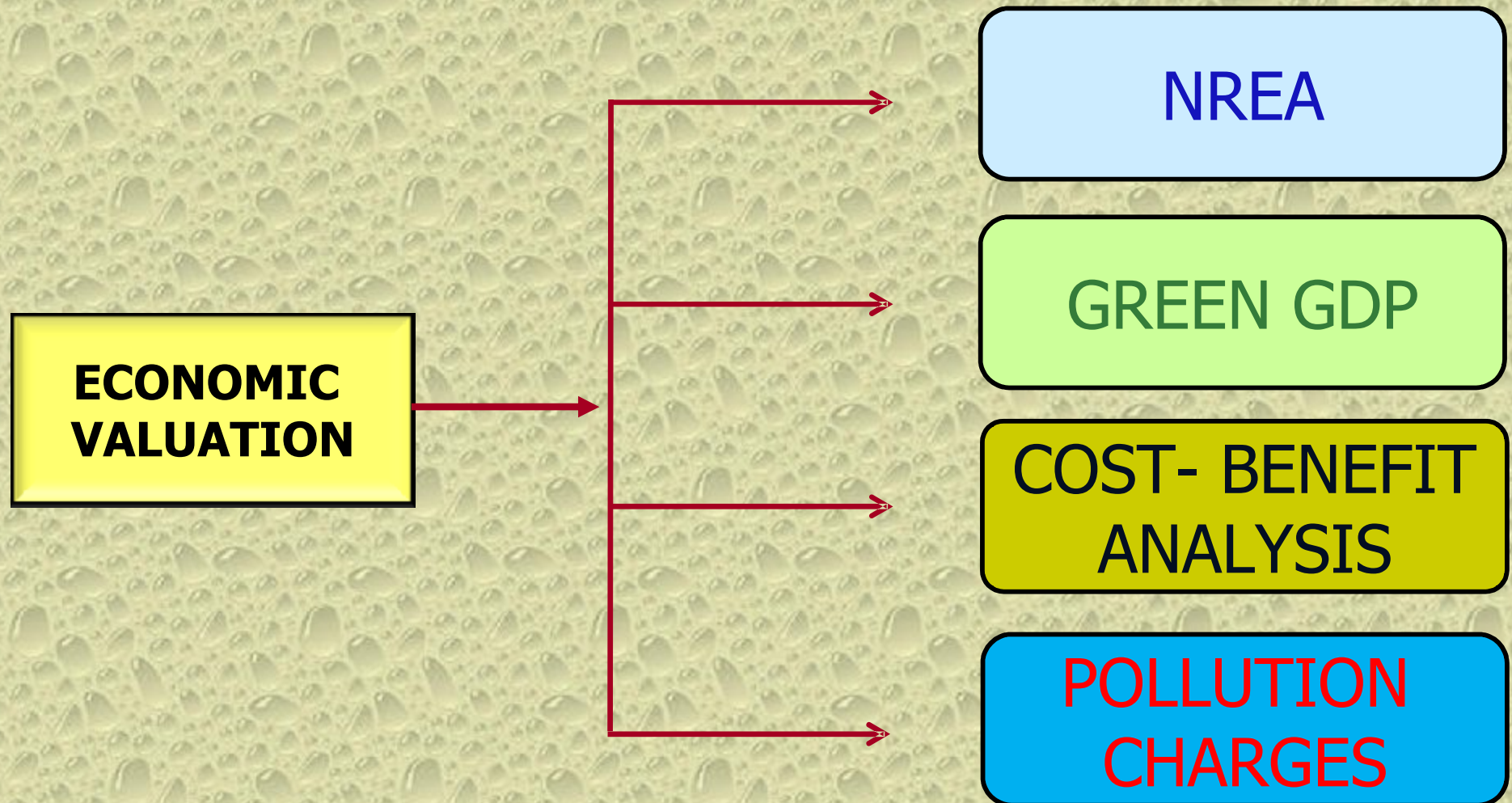
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DEFINITION

**ECONOMIC VALUATION IS A PROCESS ASSIGNING
VALUES FOR GOODS AND SERVICES OF THE
ENVIRONMENT**

**WHY DO WE VALUE?
IN ORDER TO OBTAIN SINGLE DENOMINATOR**

THE USES OF ECONOMIC VALUATION

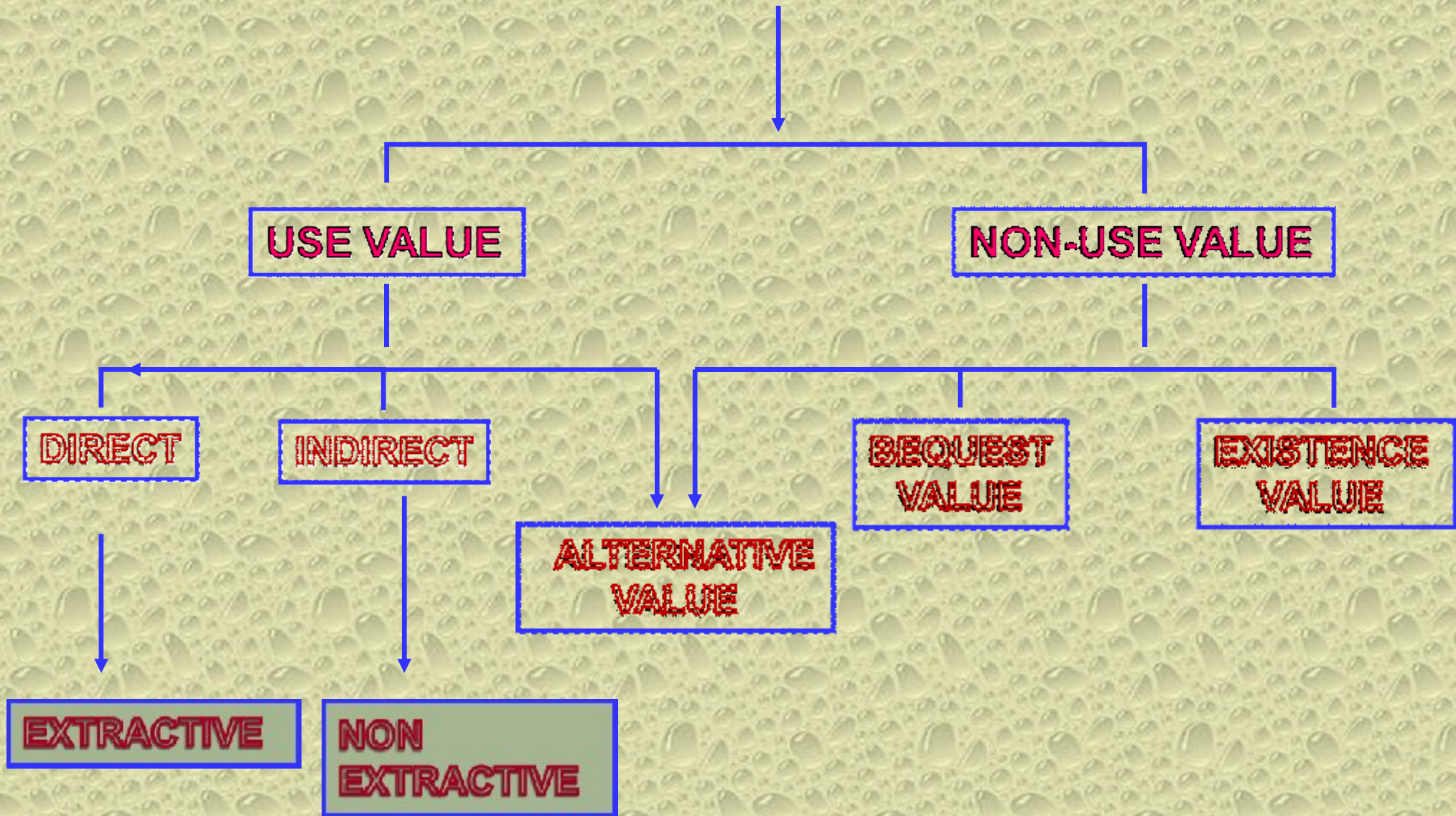


TOTAL ECONOMIC VALUE

$$\text{TEV} = \text{UV} + \text{NUV}$$

- TEV** = TOTAL ECONOMIC VALUE (NILAI EKONOMI TOTAL)
UV = USE VALUE (NILAI ATAS PENGGUNAAN)
NUV = NON-USE VALUE (NILAI TANPA PENGGUNAAN)

TOTAL ECONOMIC VALUE



USE VALUES

**VALUES THAT ARE ASSIGNED TO THE
EXTRACTED AND NON EXTRACTED
RESOURCES FOR USES BY PRODUCERS
AND/OR CONSUMERS**

NON-USE VALUES

**VALUES THAT ARE ASSIGNED TO
RESOURCES WITHOUT TO BE OBTAINED
OR TOUCHED BY THE EVALUATOR/USERS**

STAGES OF ECONOMIC VALUATION

- ❖ **Identification of Habitats/Ecosystems**
- ❖ **Identification of natural resources and services of the Habitats**
- ❖ **Quantify the functions of each natural resources and services**
- ❖ **Valuing the functions of each natural resource and service**

THINGS TO BE VALUED

- ▣ **STOCK OF GOODS (NATURAL RESOURCES) AND SERVICES OF THE ENVIRONMENT**
- ▣ **CHANGES OF EACH FUNCTION OF GOODS (NATURAL RESOURCES) AND SERVICES OF THE ENVIRONMENT**

Economic Valuation Methods

- ▣ Market price approach:
 - Actual market price
 - Human capital approach
 - Opportunity costs / forgone income
 - Cost of illness approach
- ▣ Surrogate market price approach
- ▣ Survey approach
 - Willingness to Pay approach
 - Willingness to accept approach

ECONOMIC RENT UNIT RENT/NET PRICE

- ▣ **PRICE ASSIGNED TO RESOURCES BEFORE EXTRACTION**
- ▣ **RENT IS RETURNS PAID TO NATURAL RESOURCES**

COMPUTATION OF UNIT RENT

**Economic
Rent**

=

**Production
Value**

-

**Cost
of
Production**

-

**Norma
Returns on
Investment**

$$\text{UNIT RENT} = \frac{\text{ECONOMIC RENT}}{\text{VOLUME OF PRODUCTION}}$$

Natural Resource Net Price = Unit Rent

Item	US\$
Production value	Rp
Cost of production	
Raw materials	Rp
Wages	Rp
Interest	Rp
Other costs	<u>Rp</u> (+)
	<u>Rp</u> (-)
Gross profit	Rp
NRIR (r% x Cost of production)	<u>Rp</u> (-)
Economic rent	Rp.....
Unit Rent (Economic Rent / Volume of production)	Rp.....

AVERAGE VALUE OF FOREST RESOURCE (US\$/Ha/Year)

VALUE	Type of Forest		
	Protected	Primary	Secondary
TEV	4.266,60	2.703,28	2.621,15
USE VALUE	4.035,22	2.579,51	2.523,21
<i>- DIRECT USE</i>	<i>2.531,96</i>	<i>1.416,35</i>	<i>1.200,65</i>
Timber	786,31	787,01	692,79
Fire wood	1,98	2,03	2,03
Non-wood product	367,54	621,83	500,34
Water consumed	1.376,13	5,49	5,49
<i>- INDIRECT USE VALE</i>	<i>1.503,25</i>	<i>1.163,16</i>	<i>1.322,56</i>
Land and water consumption	536,73	536,73	517,88
Carbon sink	70,67	84,81	353,37
Flood protection	687,44	333,22	316,56
Trasportation of water	74,86	74,86	74,86
Biodiversity	133,56	133,56	59,90
Non-use value	231,38	123,76	97,94
Option value	97,83	43,90	38,04
Existence value	133,56	79,87	59,90

AVERAGE VALUES OF MANGROVE FOREST

No.	ITEM	US\$/Ha
I. Use Value		6.972,97
A.	Ekstraktif (direct use):	6.034,90
1	Timber	539,36
2	Fire wood	495,27
3	Medicines	240,96
4	Prawn	2.944,00
5	Crabs	697,79
6	Fish	993,72
7	Nener (bibit ikan)	37,68
8	Charcoal	13,13
9	Eel	41,92
10	Wild life	25,17
11	Shell	5,90

AVERAGE VALUES OF MANGROVE FOREST

No.	Services	US\$/Ha
B.	indirect uses	938,07
12	Wave breaks	452,74
13	Natural tourism	58,22
14	Nursery / hatchery ground	270,76
16	Carbon sink	156,35
II. Non use value		1.045,93
17	Option value	96,57
18	Exixtence value	948,93
III. Total Economic Value		8.018,47