

A SUCCESS STORY OF TRISAKTI PORT, BANJARMASIN



Location



- TRISAKTI Port, located 20 miles from Barito River estuary, Banjarmasin, South Kalimantan , Indonesia.
- Geographic position at 03°43'00" N - 114°41'00" E
- Main gate of goods and commodities distribution of South and Central Kalimantan

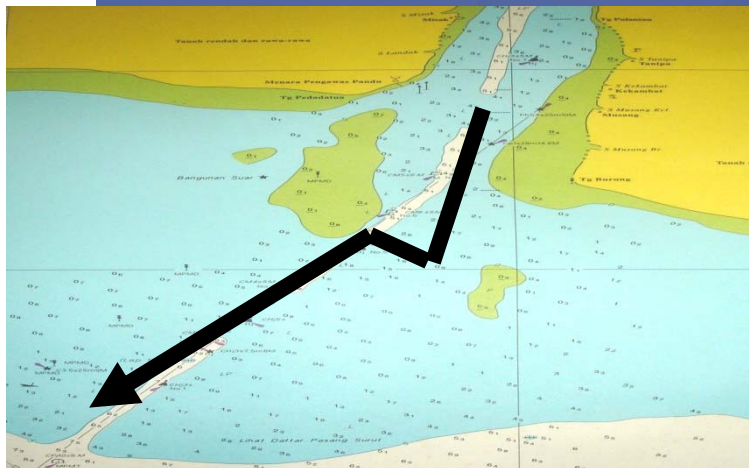
Old Channel

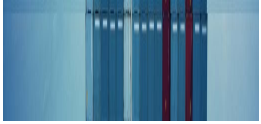
- Managed by Indonesian's government
- Ships only can pass the channel 6 hours / day , depending on tidal window
- One way access channel
- High siltation rate (Maintenance dredging volume 2 – 3 million m³ / year)
- Sharp bend channel near the river mouth



Old Access Channel

- Alignment : SSW
- Side slope : 1 : 65
- Dimension : W = 70 - 80 m
D = - 3,5 M LWS
L = 14 Km





Problems in the old channel

- High Maintenance cost of the channel being government burden



High number of vessel on queue → High congestion at outer bar

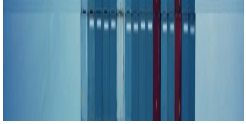
- Depending on tidal window → Traffic not continuously for 24 hours
- High potential risk for ship collisions and grounding



- Longer approaching time



High Cost for Port Services



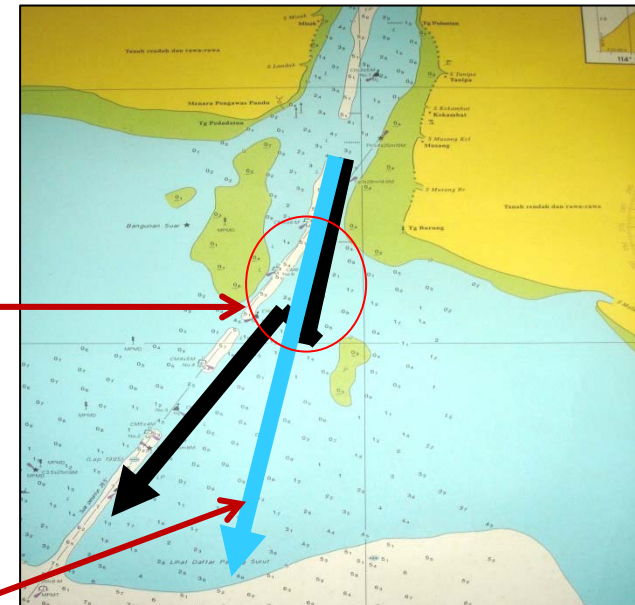
DETEC Studies

- Based on access channel final report studies at Banjarmasin Port by DETEC, 27 Feb 1998 that **Old Channel was ineffective as mentioned below** :
 - High Sedimentation (4.5 million m³/ yr).
 - Not straight alignment ;
 - High maintenance cost.

Recommended by DETEC to **develop a new channel with the advantages** :

- Low sedimentation (2.5 million m³/ yr);
- Straight alignment;
- Lower maintenance cost.

(To optimize maintenance dredging)



Improvement Concept

Based on : The Study to The Access Channel To The Port of Banjarmasin
by MH. Detec ; 1997 & 1998

IMPROVEMENT CONCEPT

- 24 hours access channel operation
- 2 way traffic
- Minimized siltation in Access Channel
- Significant improvement on Navigational safety

ALTERNATIVE 1
Improve Access
Channel at
Present Position

ALTERNATIVE 2
New Alignment
Access Channel

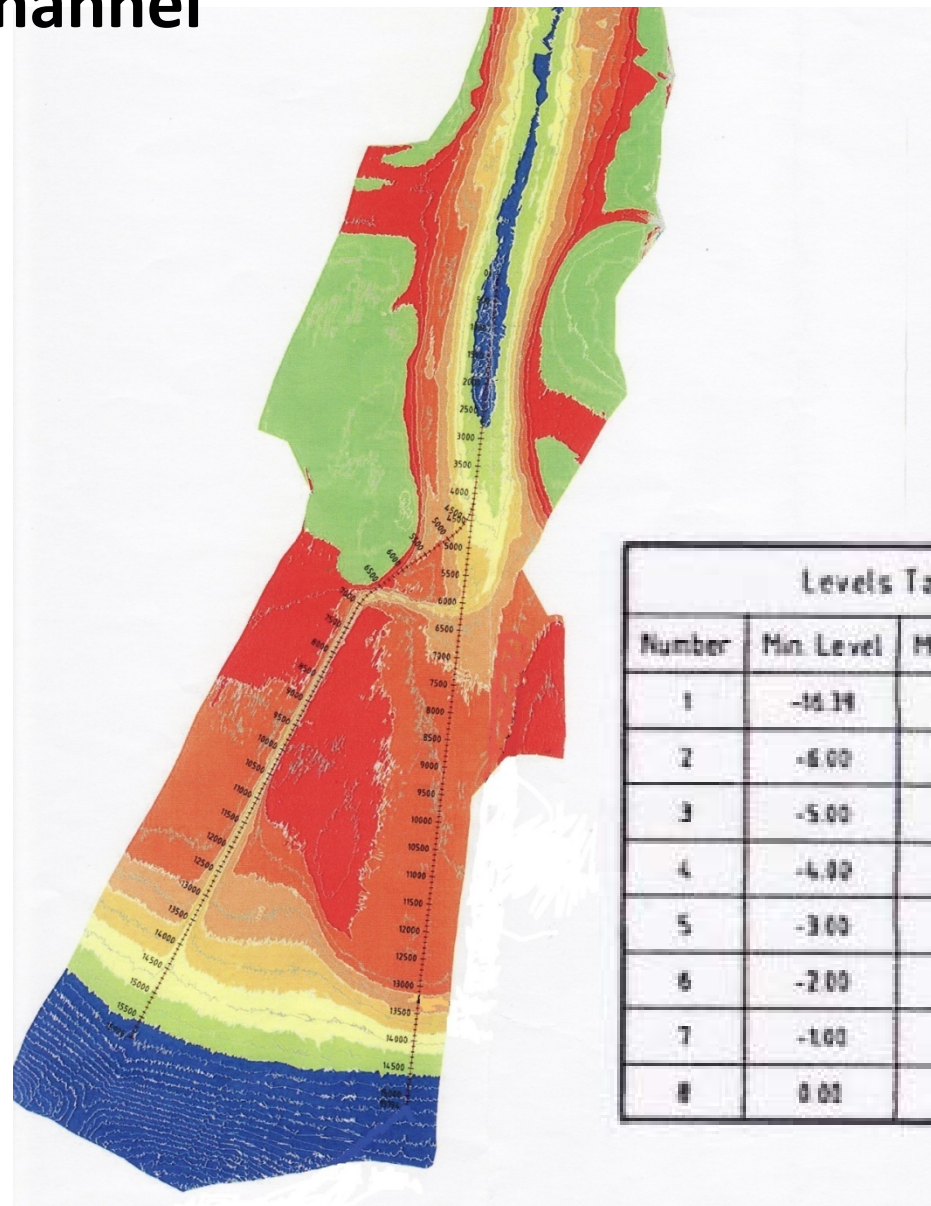
ALTERNATIVE 3
Submerged Wall & Improve
Access Channel at Present
Position

- Shorter Execution Time due to Limited traffic hindrance
- Flow direction parallel to Access Channel alignment
→ improve navigation safety & reduce siltation
- Lower siltation rate → reduce maintenance cost

New Access Channel Alternatives



New Access Channel Selection



Levels Table			
Number	Min. Level	Max. Level	Color
1	-10.14	-6.00	Blue
2	-6.00	-5.00	Light Green
3	-5.00	-4.00	Yellow
4	-4.00	-3.00	Orange
5	-3.00	-2.00	Dark Orange
6	-2.00	-1.00	Red
7	-1.00	0.00	Dark Red
8	0.00	2.34	Green



New Access Channel

- Managed and maintained by Private Company (JO) → Start operation : Januari 1st 2009.
- Indonesian government not incurred maintenance cost
- Navigable 24 hour / day
- Two way access channel
- Straight Channel



Comparison Old and New Access Channel Operational & Technical Condition

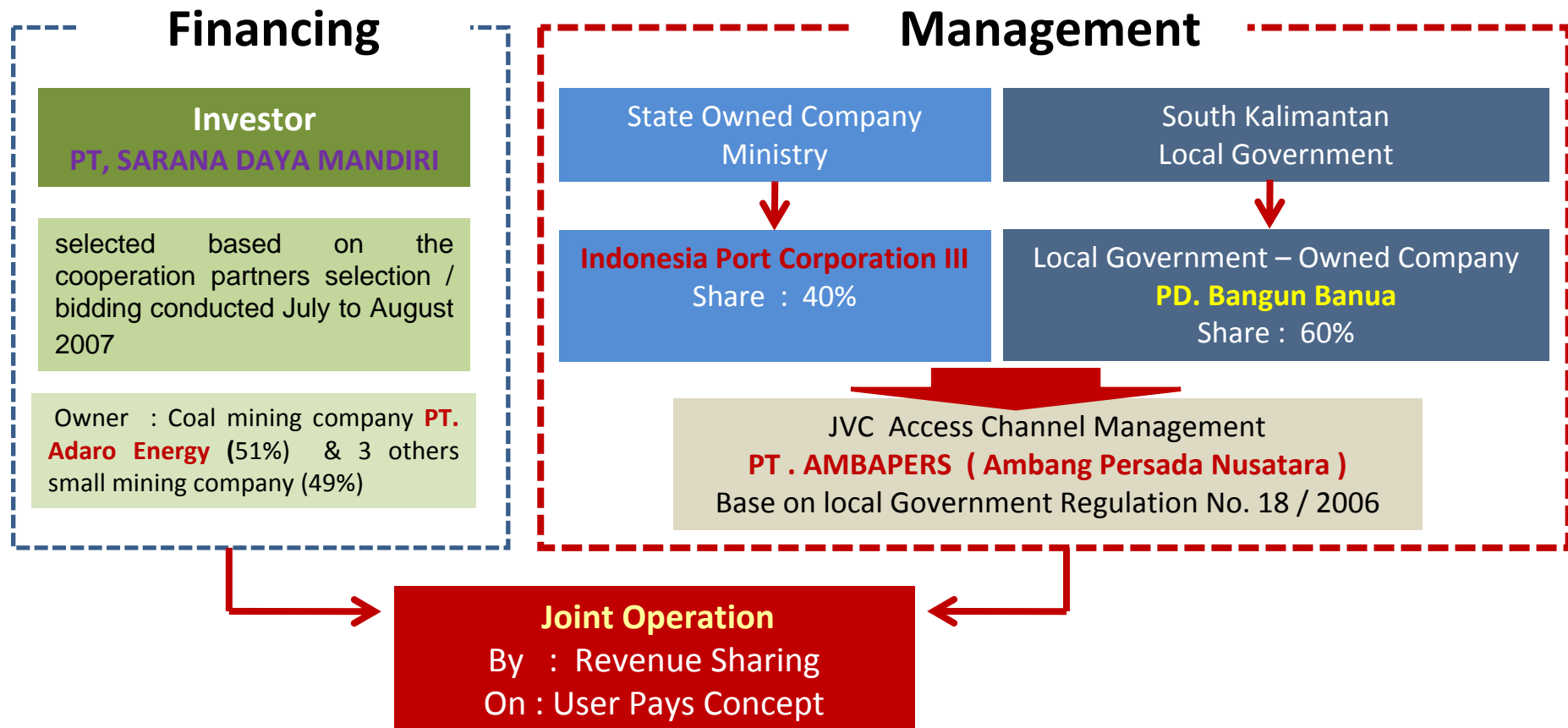
No.	Description	Old Channel	New Channel
1	<u>Physical Condition:</u> Length Width Depth Location	8,6 Nm, 70-80 m 3,5 M LWS 03°40,700" S - 114°45'00" E	8,1 Nm, 138 m 5,5 M LWS 03°39,659" S - 114°28'609" E
2	<u>Accidents:</u> Collisions Grounded	8 53	1 3
3	<u>Service availability :</u> Working Hour Traffic Scheme	6 Hours/day One way	24 Hours/day Two ways
4	Maintenance Dredging	4.5 Million M3/Yr	2.5 Million M3/Yr

Comparison Old and New Access Channel Management & Financing Scheme

No.	Description	Old Channel	New Channel
1	Management Model	- By Government - No Channel fee	- By Private Company - Channel fee
2	Maintenance Cost	Government burden	Not a Government burden Financed by channel users (User Pay Concept)

New Management & Financing Scheme

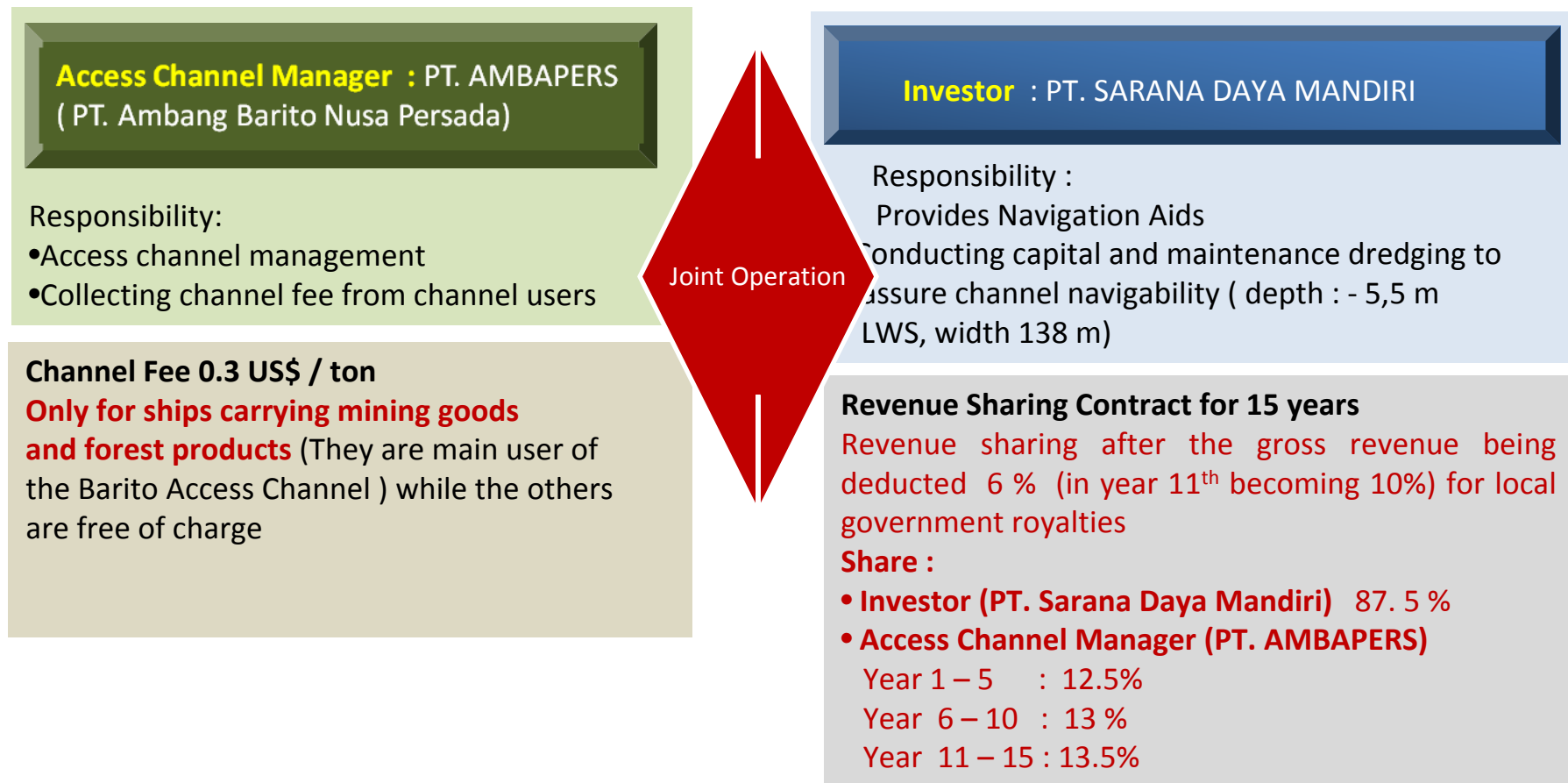
alternative funding source is needed to accelerate Barito River navigation channel improvement in order to anticipate the occurrence of service deceleration that can cause economic loss → **Public Private Partnership (PPP)**



“ USER PAYS ” Concept

ships carrying mining goods and forest products have to pay **Channel Fee 0.3 US\$ / ton**

This regulation is being enforced since January 1st, 2009 under the Decree of South Kalimantan Governor No. 188.44/0463/KUM/2008, December 24th, 2008



Dredging Implementation

Capital / Maintenance dredging carried out by contractor s hired by
Investor : PT. Sarana Daya Mandiri

Contractor for Capital Dredging :

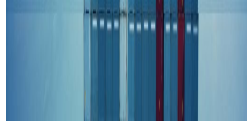
PT. PENKONINDO

(Van Oord's Netherlands Representative in Indonesia)

Conducted	: June 2008 – December 2008
Cost	: 44 million US\$ (Rp. 450 billion)
Dredged volume	: \pm 6 million m ³
Dredging Equipment	: * Cutter Suction Dredger (CSD) / HAM 291 * Trailer Hopper Suction Dredger (THSD) / HAM 312 * Water Injection Dredger (WID) / HAM 922 * Motor Launch (ML) / HAM 814

Maintenance dredging : by other contractor

Conducted	: August - December 2009
Cost	: Rp. 100 billion
Dredged volume	: \pm 3 million m ³ (silting \pm 30 cm for 15 km)
Dredging Equipment	: Mesuun Ship ; Honduras flagship (TSHD / Trailer Hopper Suction Dredger)



Impact of New Channel

Increase Access Channel Navigation Safety

Increased Ship & barge Dimension with draft up to – 5,5 m Lws

Coal barge :

- 2008 : capacity 6.000 – 7.000 ton
- 2009 : capacity 12.000 – 14.000 ton

Container ship :

- 2008 : capacity 200 containers
- 2009 : capacity 500 containers

Increased Ship & barge Traffic

Container Ship Traffic per day

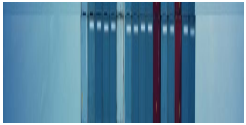
2008 : average 10 ships / month

2009 : average 15 ships / month

Coal Barge Traffic per month

2008 : average 347 units / month

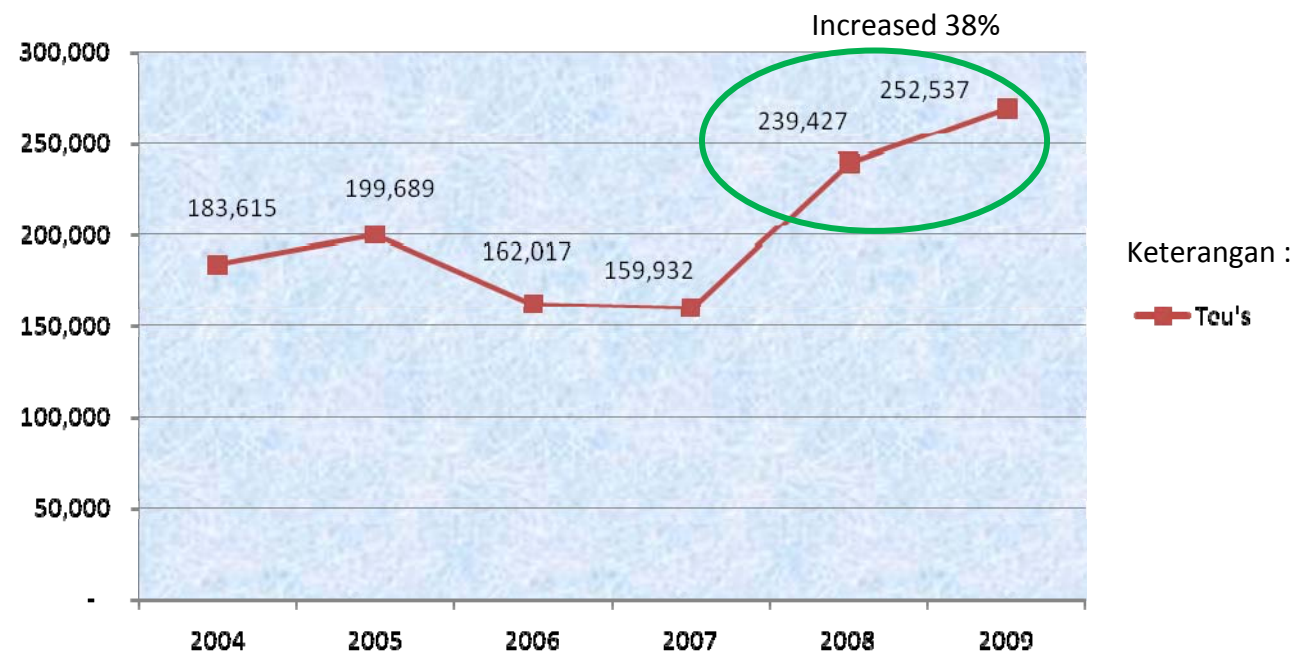
2009: average 480 units / month



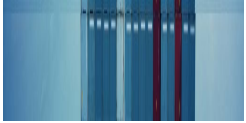
Impact of New Channel

Increased Cargo Traffic

Container

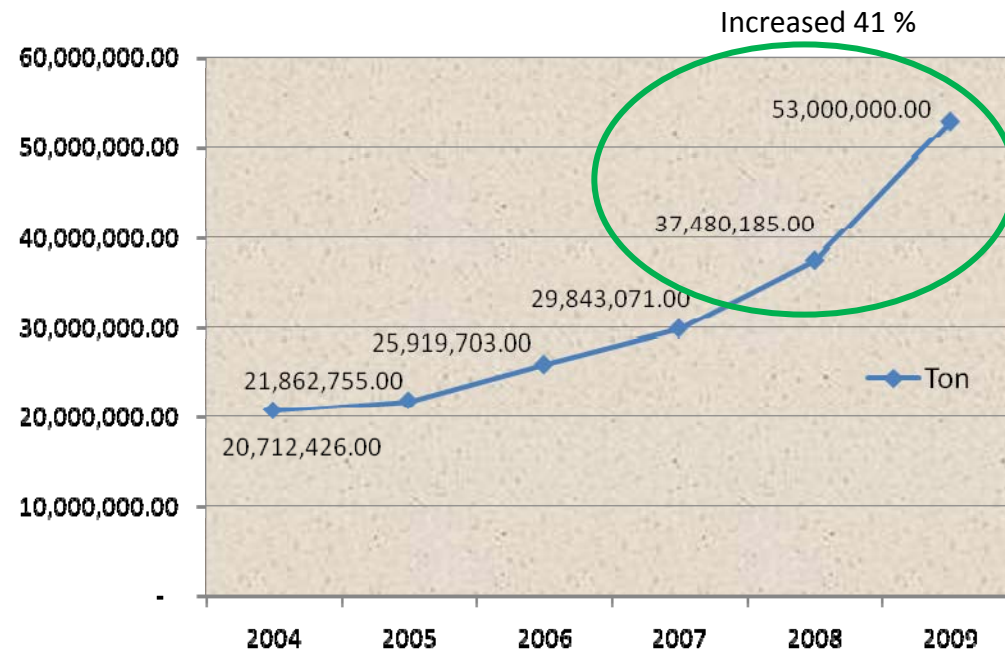


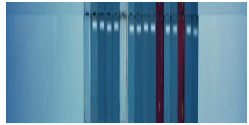
In 2010 forecasted to reached 300.000 Teu's



Impact of New Channel

Coal





Impact of New Channel

Additional Revenue from channel fee

Part of the revenue is use to financed the maintenance dredging cost

Channel Fee Revenue :

Target in 2009 (comodity : coal) : Rp. 150 Billion

Realization in 2009 (comodity : coal) : Rp. 162 Billion

Target in 2010 (comodity : coal) : Rp. 180 Billion

(Optimistic about the increasing market demand for coal prices and the world)

Stimulate economic growth and accelerate local / national development

THANK YOU