

**Agriculture microinsurance as the initiator of integrated risk
management to cope with climate risks issues for sustainable
farming –
Lessons learnt from Indonesia**



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Jakub Nugraha,

Division Head of Microinsurance and Agriculture Insurance
Asuransi Central Asia (ACA)

People-Private-Public Partnership in Shrimp Business

Focus = make farmers / fish growers happy → Aquaculture 4.0 (TAMBAK apps) = reduce harvest failure + increase profit

1. **Commercial** based scheme = with the least or no subsidy from government (“smart subsidy”) → create fighting spirit + business sense → entrepreneurship
 2. **Value Chain** = multi stakeholders from fish growers, aquaculture industry, financial industry , e-commerce
 3. **Risk Mitigation** = must be provided by each of the stakeholders
 4. **Smart Farming** = real time water quality and shrimp’s health (medication), automatic feeder (cost efficiency), best time to harvest
- ✓ **Access to technology (Aquaculture 4.0)** = 3 million hectares for aquaculture
 - a. Good agriculture / good aquaculture practice, professional agronomist or aqua-culturist,
 - b. Weather forecast / climate data
 - c. Post-harvest handling including packaging, branding, traceability information, etc
 - ✓ **Access to market** → from field to kitchen → off-taker, reduce middlemen, e-commerce, etc.
 - ✓ **Access to finance** → fintech, cooperatives, rural banks, micro insurance, micro saving, micro investment → financial literacy, financial inclusion to fulfill each of stakeholders Key Performance Indicator by creating a cashless society.



Digitalize Shrimp Aquaculture

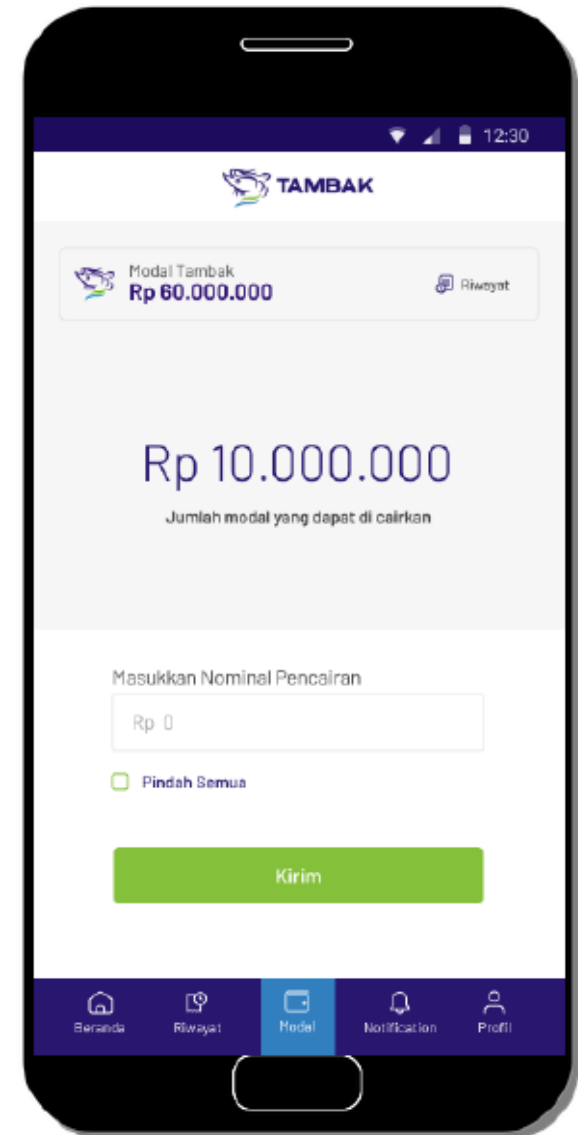
Digitalize Shrimp Aquaculture (2/3)



Homescreen Non-KYC



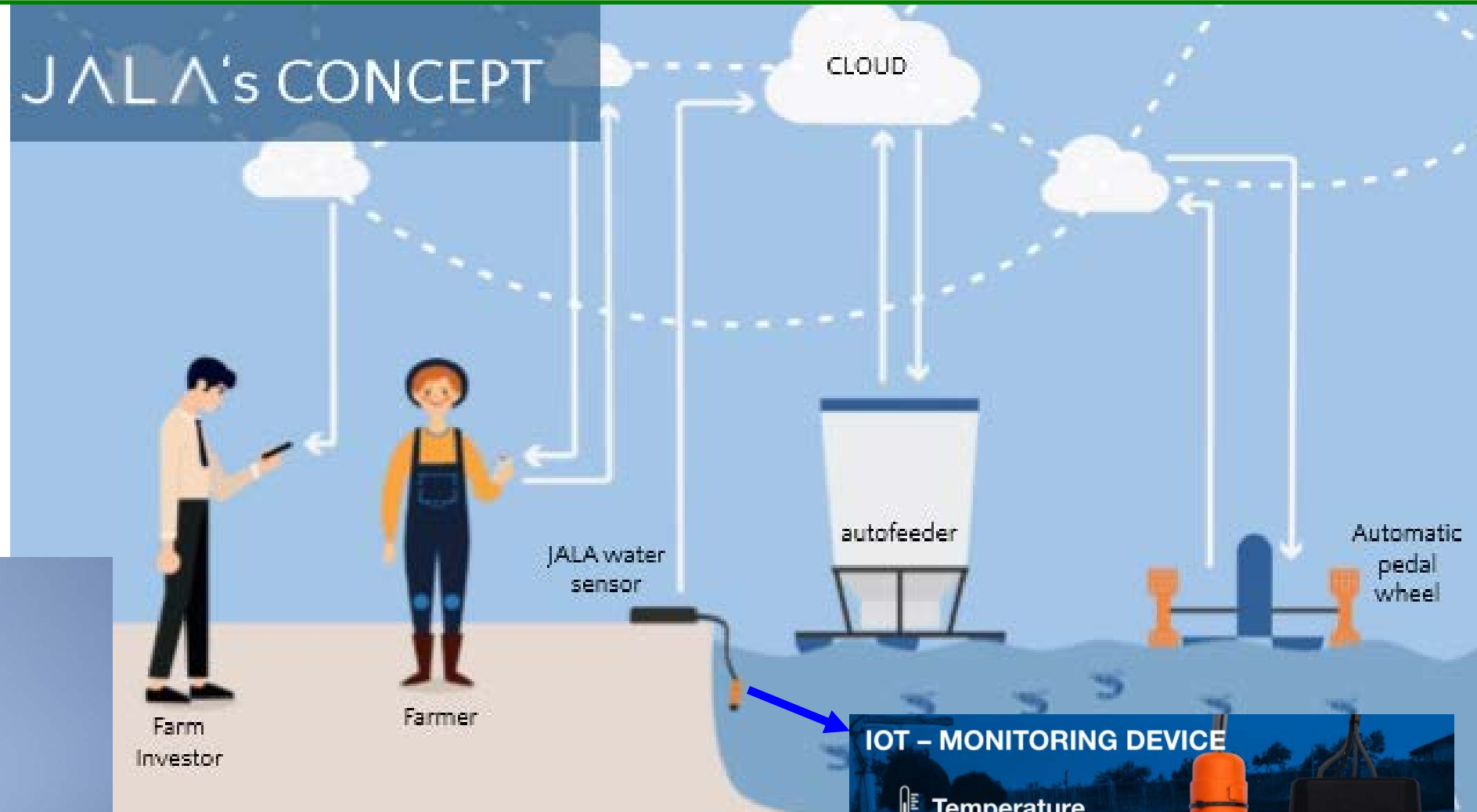
Homescreen KYC



Modal TAMBAK

Digitalize Shrimp Aquaculture (3 /3)

Automatic Weather Station for research purpose → data sharing with insurance



IOT - MONITORING DEVICE

- Temperature
- Salinity
- pH
- Dissolved Oxygen



Shrimp Insurance (commercial based) →

a. Indemnity scheme that covers:

- 1) Death of fry / shrimp due to disease, pest, virus, natural disaster
- 2) Damage to the shrimp pond and its infrastructure due to natural disaster

b. Rate (for the first year only) = 3% of the sum insured / per cycle (150 days), a consortium of 7 general insurance companies with a joint-product scheme based on Value Chain and Integrated Risk Mitigation business model. The sum insured is about between USD 4,000 – USD 10,000 / pond.

c. A few traditional growers, more on semi-intensive and intensive shrimp ponds

d. Target = 50,000 hectares by December 2020, expected loss ratio less than 60%

e. The insured = growers, the policy holders = lender (fintech, cooperatives, credit unions, rural bank)

PELAPORAN DAN PROSES KLAIM

- 1) Dalam waktu 3x24 jam setelah musibah terjadi Tertanggung wajib melaporkan pertama kali kepada Penanggung melalui sarana komunikasi tercepat mengenai terjadinya musibah atau kerugian dengan menyertakan foto-foto mengenai kerusakan dan mitigasi risiko yang telah dilakukan.
- 2) Pelaporan klaim pada ayat 1 diatas segera ditindaklanjuti Penanggung dalam waktu 7x24 jam kerja dengan melakukan survei klaim ke lokasi Tambak Udang yang dilaporkan untuk mengumpulkan dan menganalisa semua fakta yang ada.
- 3) Hasil survei klaim dituangkan dalam bentuk Berita Acara Survei Klaim yang ditandatangani oleh:
 - a. Tertanggung, sebagai pelapor,
 - b. Petugas pendamping yang berasal dari Dinas Kelautan dan Perikanan setempat (untuk tambak ekstensif) atau pihak yang dipekerjakan khusus oleh petambak untuk mengelola tambak,
 - c. Petugas Klaim Asuransi, sebagai penerima Berita Acara Survey Klaim mewakili Penanggung, yang langsung menerima Berita Acara Survey Klaim lengkap dengan dokumen-dokumen pendukung asli.
- 4) Berita Acara Survey Klaim akan dilengkapi dengan Dokumen Pendukung Klaim, dan menjadi dasar Penanggung untuk memutuskan apakah musibah yang terjadi dapat dijamin atau tidak sesuai syarat dan ketentuan Polis.
- 5) Apabila dalam satu peristiwa musibah, menimpa lebih dari satu Tertanggung atau menimpa lebih dari satu Tambak Udang, maka laporan klaim dibuat untuk setiap Tambak Udang yang terkena musibah.

DOKUMEN PENGAJUAN KLAIM

- Formulir Pelaporan Klaim yang ditandatangani oleh Tertanggung;
- Berita Acara Survei Klaim setiap lokasi tambak;
- Fotokopi atau hasil scan KTP Tertanggung;
- Foto kerusakan tambak dan/atau foto kematian Udang yang ada di dalam tambak; dan
- Dokumen lainnya yang relevan dengan kejadian kerusakan atau kerugian yang dialami Tertanggung.

Dokumen lainnya sebagai Contoh :

- a. Untuk Petambak Semi Intensif dan Intensif menyerahkan :
 - i. Laporan Monitoring Kualitas Air Tambak minimal 2 minggu sebelum tanggal kejadian,
 - ii. Surat keterangan hasil laboratorium,
- b. Khusus untuk petambak udang tradisional (ekstensif) dapat menyerahkan surat keterangan dari dinas Kelautan dan perikanan setempat bahwa lahan terdengar hama penyakit atau bencana alam dan lain-lain.

PERLAKUAN TERHADAP SCRAP/SALVAGE

Penanggung / Asuransi berhak atas separuh atau sebagian dari hasil penjualan udang apabila terjadi kerugian yang dijamin oleh polis disebabkan oleh penyakit pada udang dimana usia udang telah mencapai 50 (lima puluh) sampai dengan 60 (enam puluh) hari dari sejak tanggal tebar benur/benih.

DEDUCTIBLE / RISIKO SENDIRI

Deductible / risiko sendiri dikenakan hanya untuk petambak sederhana/ekstensif/tradisional yaitu sebesar 5 % of claim untuk klaim yang disebabkan karena penyakit.

Catatan Penting

- Brosur ini hanya menggambarkan informasi secara umum dan bukan merupakan suatu kontrak. Kondisi dan aturan mengenai Produk Asuransi akan dijelaskan secara rinci pada perjanjian kerjasama dan polis asuransi
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Kantor Pusat
PT Asuransi Jasa Indonesia (Persero)
Jl. Lat. Jend. MT. Haryono Kav. 61, Jakarta Selatan 12780
Telp: (+62 21) 799 4508, 7987008, Fax: (+62 21) 797 1015, 799 5364

Kantor Grup Head Asuransi: Pertanian Mikro & Program Pemantahan
Gedung Mentari MTH, Lt. 15 Surin 1902-1905 Jl. Letjen M. T. Haryono,
Kor. 224, Jakarta Selatan 12550
Telp: (+62 21) 791 84323

1500-073
www.jasindo.co.id

Asuransi Jasindo **JasindoID** **@JasindoID**

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MARI Berasuransi **OJK** **OTORITAS JASA KEUANGAN**

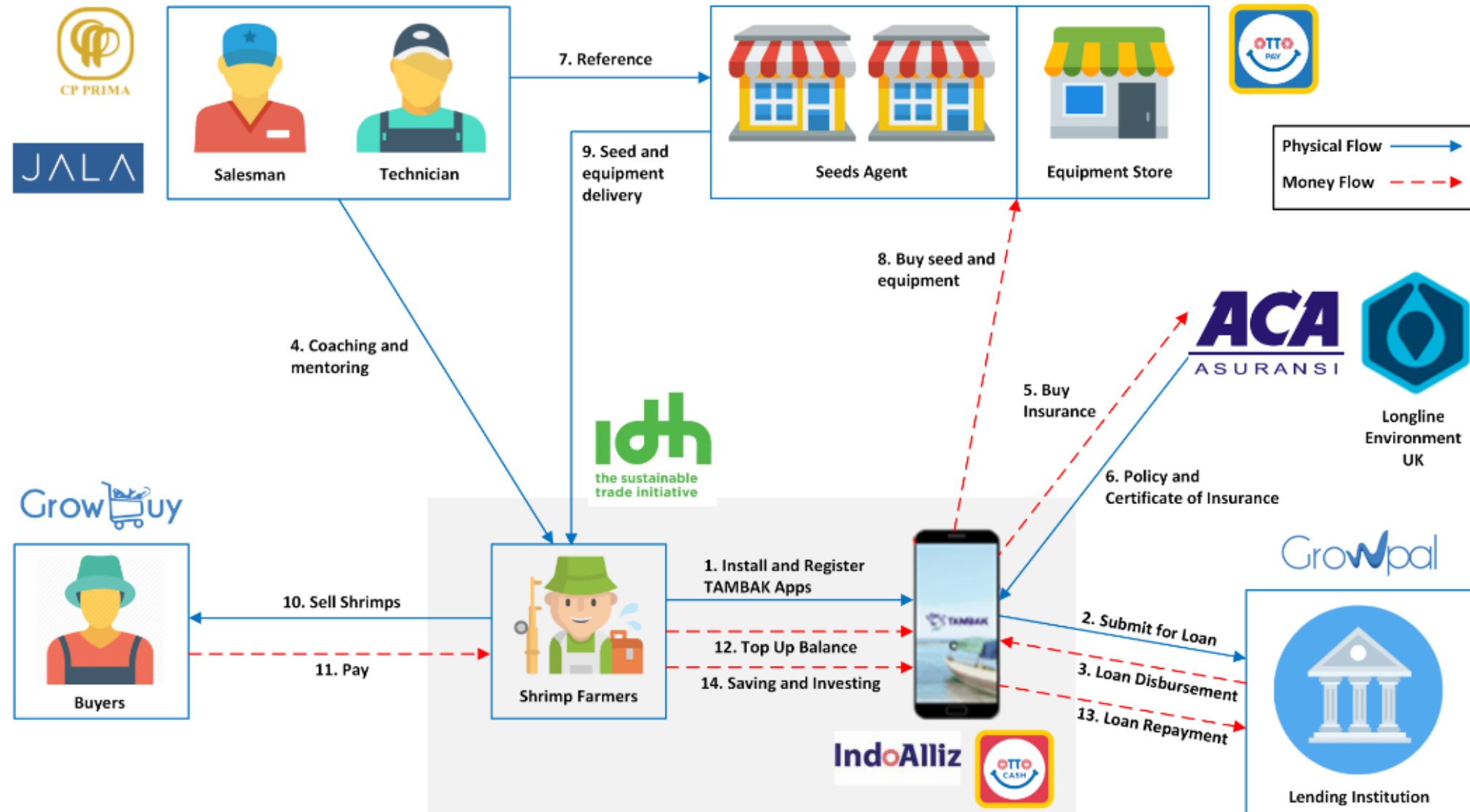
A consortium of 7 insurance companies (1 state coy, 5 half-state coy, 1 private coy)

Integrated Risk Mitigation by each of the stakeholders → reduce the possibility of harvest failure for Sustainable Farming

Stakeholder	Target(s) to Achieve / Expected results	Risk Mitigation
Shrimp grower	<ul style="list-style-type: none"> • Increase in profit, sustainable business 	Follow SOP supported by IoT thru access to: technology, market and finance
Hatchery, probiotics, etc	<ul style="list-style-type: none"> • Productivity, traceability, • Continuous sales for the next cycles 	<ul style="list-style-type: none"> • Providing frequent technicians with customer friendly mobile apps. • The Value Proposition is to help the shrimp growers achieve their targets: secure repeat order more efficiently and expanding the market
Off-taker	<ul style="list-style-type: none"> • Better harvest, reasonable commodity price from the grower 	<ul style="list-style-type: none"> • Frequent field supervision, reward for premium quality product • After harvest technology → traceability, environmental safe, cost efficiency for the growers understand the off-taker's standard
Insurance	<ul style="list-style-type: none"> • Manageable loss ratio, the least fraudulent claim through social control amongst all stakeholders thru ecosystem • Real time water quality monitoring, • Qualified data for underwriting guidelines 	<ul style="list-style-type: none"> • Deductible = limitation in period of insurance for death of the fry / shrimp until DOC 60 due to disease, pest and virus'; whilst the insurance period of the loss of the fry/shrimp due to natural disaster until 150 days. • Policy wording that ensure growers to obey the SOP, otherwise the claim will be rejected • Ensure each of the stakeholders apply her own risk mitigation to reduce harvest failure for continuous repeat order from the new growers
Lender	<ul style="list-style-type: none"> • Comply in disbursing the loan, • Non Performing Loan under 3 % 	<ul style="list-style-type: none"> • Credit insurance (repayment capacity), shrimp insurance (harvest failure) • IoT that provides the real time grower's production cost, yield, payment from the off-taker, incentive for loan repayment before its due date
Local government	<ul style="list-style-type: none"> • Real time yield data, • Number of young fish growers, • Local economic development, employment, etc. 	<ul style="list-style-type: none"> • Local regulation on the implementation of Value Chain based on risk mitigation which adopt the climate risk issues • IoT (Farming 4.0) will enable any government agency to monitor all stakeholders role, and ensure the fulfillment of financial inclusive

Ecosystem of Sustainable Farming Through Integrated Risk Management

Digitalization of Shrimp Aquaculture



Fish growers are caring about their long-term shrimp business which is adapted to climate change

Win-win-win solutions for 3 parties: People – Private – Public

Main barriers	<ol style="list-style-type: none"> 1. Public sector = strongly believe that subsidy for farmers is one of the best ways to help the farmer (free fertilizer, very low interest rate, free insurance premium, etc.), farming is a highly regulated area and not to give a chance for private sectors to participate 2. People sector = mindset that it is their right to get subsidy from the government 3. Private sector = opinion that farmers / fish growers relates with political issues, very high risk business,
How to overcome the main barriers	<ol style="list-style-type: none"> 1. Public sector = <ol style="list-style-type: none"> a. Give a chance for private sectors to participate with their knowledge, technology, resources which are needed by the People to become an entrepreneur and create a sustainable farming ecosystem b. Issue a new regulation, either at the local or national level, that relates with Sustainable Farming, Green Financing, which involve: <ul style="list-style-type: none"> • People-Private-Public Partnership scheme which synergizing all stakeholders • Innovative subsidy program instead of insurance premium and loan interest rate • The involvement of donor who can provide knowledge or other innovative ideas or approach to facilitate all stakeholders to start the new strategy • The implementation of Smart Farming technology which might adapt to climate change threat 2. People sector = involve more young generation who are more adaptable to new ideas, innovation, creativity that agriculture is worth to be developed by using IoT (technology) to lead them into a great future with much better life through Smart Farming concept. 3. Private sector = initiate and encourage other main stakeholders in agriculture ecosystem, including development agency to start creating an ecosystem based on commercial Value Chain and Integrated Risk Management, which could be started with a small scale pilot project to find out the most convenient model.



Thank you
nugraha.jakub@gmail.com