Annex H. Notes of Workshop and Training Sessions

NOTES OF WORKSHOP SESSION

1. Hee Yong Thomas Kim:

Hee Yong Kim is a Research Fellow of the R&D Strategy and Investment Analysis Division of Korea Institute of S&T Evaluation and Planning; currently he is involved in the Evaluation Policies of Science and Technology.

In his presentation entitled Green Technology Policy of Korea "Green is Life" He explained what Traditional green technology means and what it covered, the traditional green technology means eco friendly resource that is renewable energy, energy efficiency driven technology, climate change technology that contributes to low carbon and green growth to overcome the limitations of existing technologies or create a new market through convergence of new technologies or traditional products and industries. He also presented the concept of Green Technology that covers i.e. Prediction Technology, Production and Consumption. On the GT R&D Master plan, with its vision that covers 3 goals i.e. Green Science & technology capability, Green Industrial competitiveness and Environment sustainability. Three major policies that support the green growth and green technology, and GT roadmap was constructed by Presidential Committee on Green Growth (PCGG) based on the GT R&D master plan. The Major Policy and Key Agenda for GT are: 1. Green Technology R&D master plan and 2. Green technology roadmap. On the R&D investment; the R&D expenditure on green tech is approximately 1.4. Billion dollar in 2008 and R&D expenditure on high-priority technologies: 1 billion dollars. The high prioritized technologies are Prediction Technology (Climate Change prediction and modeling, etc); Alternative Energy Technology (Low price tech. of silicon-type solar battery tech etc); High Efficiency Technology (Eco-friendly low-energy construction tech.); Post process Technology (CO_2 capture, storage and process (CCS) tech, alternative water resource tech.); Pollutant industry (Knowledge service etc.) The strategy for GT Development emphasized on Green transformation using current growth engine technology; apply green technology to the

industry through photovoltaic system (semiconductor); Land-offshore wind power (Machine: shipbuilding); Green car (vehicle battery) which is very competitive in Korea such as semi conductor, vehicle, ship etc.

As Green Technology is essential for the green growth which includes environmental sustainability as well as industrial growth while the high-priority technologies are selected from green tech for focused development, the Government R&D Budget for GT will be doubled by 2012 and various plans related to green tech are established to update to the green tech. R&D master plan is needed to include recent plans from several ministers

Questions and Comments from the Audience

No	Audience	Questions/Comments	Answers
1	Josefa V. Muñoz	Does your govt. Involved in the establishment of Green Tech? How?	Yes, through the introduction of their plan on Green Tech.
2.	Josefa V. Muñoz	Is there any significant development through the Govt. Involvement?	Yes, but it is not only through the Govt. But also through the private sector, their contribution to the R&D investment raised 8.4 times, on the industry the market share raised 46% in '09 and in ship building the market share was no 2 in '09 which was 40.1%

2. Herry Suhermanto: Agenda Setting for Green Growth Era

Herry Suhermanto is the Director of Empowering of Cooperatives and SMEs, National Development Planning Agency, presented the following issues to be addressed; 1. What markets trends have been created for green technology based SMEs; 2. Can they be addressed with exsiting technology, or is new technology required?; 3. What drives the gorwth of these markets?; 4. What barriers do the SMEs face to access these markets green

technology?; 5. How can government policies help overcome the barriers and facilitate access to these markets?; 6. What programs have been implemented to assist this green technology based SMEs? He elaborated each of the issues and concluded the following; a. Develop incubators as institutions to disseminate related green knowldge and information; and the know how to practice it properly; b. Focus to the creation of green entrepreneurs equipped with capability of using appropriate green technology – with respect to local wisdom, ownership, sustainability, economic, environmnetal and social value; c. Provide incubators with related resources and services developed locally yet interconnected nationally and internationally-good prospect for SMEs to meet local needs and provided locally, yet able to supply bigger market with green products; d. Active Stakeholders participation: support for wider connections, upgrade standards to meet consumers' demand, promote and disseminate innovation and technology information; creating a win-win environment via partnership.

Questions and Comments from the Audience

No	Audience	Questions/Comments	Answers
1.	Gerardo de la Peña Hernandez	How do you anticipate the market trend? How far is the involvement of the Government in the establishment of an incubator?	Based on the required product or services The government provide subsidy and resources

3. Anita Firmanti: Green Technologies for SMEs in the Development of Hosuing Sector

Anita Firmanti is the Director of Agency of Research and Development, Research Institute for Human Settlements.

She presented the relation of Human Settlements and the SMEs prospect in Housing Development which could cover the Housing Development itself, Planning and design, Housing Construction, Building Component industry, and Operation &Maintenance. This required the Green Technology involvement to 1. minimize degradation of environment; 2. Zero or low green house gas emission; 3. Safe for use and promotes healthy and improved environment for inhabitants; 4. Conserve the use of energy and natural resources; and

promote the use of renewable energy resources. There are facts in housing development among others are a. Gap between demand and supply; b. affordability; c. local vs imported materials; d. urbanization; e. Global Gas house emission. To overcome this there is no other way but implementing green principles in housing/building sector. She showed caption of Model of Housing Compound with Low CO_2 Emission (Reducing CO_2 emission through planning and design). In the construction process; reducing the construction time and waste building strcture system, reducing the use of materials for building structure sytem, reducing the use of timber from natural forest. In the building materials ; use of organic waste materials, use of industrial waste materials, bamboo based building component, lightweight concrete, use of Sidoarjo eruption mud. For drinking water through salt water treatment using Dynamic Mixer Hemat, Efficient Water Treatment Installation. The water treatment is carried out through Hydrum Pump, Dynamic Mixer Model, Brackish Water Treatment and Household water Installation. In Sanitation the concept is Water treatment with contact media. For Public Lavatory Model for Endemic Area and Areas with Limited Water Resource the concept use is Urine Diversion Toilette that has the advantage of Need less water for flushing, faeces for compost and urine for liquid fertilizer, use bamboo for walls and use local materials for the floor.

Transferring of new technologies to SMEs through 1. identification of local available materials; 2. designing the production process; 3.training on the production materials; 4. Business development process; 5. training on the construction process. The lesson learnt from the the technology transfer : a. Need intensive technical assistance; b. Financial support for initial production; c. new initial market; d. stability of product quality. The conclusion were: 1. There is a big chance in the development of SMEs in Housing and building sector; 2. The Global movement on Green technology in housing and building sector cannot be avoided and will be a big potential market for green based SMEs; 3. Plenty of green technology in housing/building sector have been developed and could be implemented for the development of green based SMEs. Incubators in green technology are needed as the bridge between research institutes, SMEs and housing/building sector as market.4. Although there is no specific treatment in developing green based SMEs but

special incentive can accelerate the growth of green based SMEs as well as the green living style.

Questions and Comments from the Audience

No	Audience	Questions/Comments	Answers
1.	Yang Yu	A very good example for my country	
2.	- Maizatulliza Zakaria - Josefa V. Muñoz - Lauren T. Velasquez - Gerardo de la Peña Hernandez	We think the incentive system is good if it is possible to be implemented	

4. Morten Boje Blarke : Identifying Green Technology Areas for SMEs

Morten Boje Blarke is an Assistant Professor at the Department of Development and Planning Aalborg University, Denmark.

He presented the use of wind power for energy. It was resented at the beginning, because the authority still think to have nuclear energy to replace oil and coal but after so many diagreement the authority turn to other source as the source energy "the wind". Denmark success in wind power technology and sustainable energy are developed deeply rooted in complex contectual (social, political, economic, educational) conditions that may inspire not be replicated. The inspirations were 1. Early SME Developments were anti-establishment-venturing into technologies and territories that challenged vested interests. 2. Early SMEs developments is characterized by small successes and big failures. 3. Transparency in public utility decision-making and methods was crucial for academia to getting involved. In creating an SME-friendly context these are to be noted and considered 1. Failure is a pre-condition for success. Support risk takers, 2. Transparent and Democratic decision making is pre-condition for constructive conflicts. Support diversity and productive opposition. 3. Access to new markets is key. Invent domestic markets. 4. Prepare to work in

Project-based multi-lateral development organizations. Support project-based education and celebrate entrepreneurship. 5. Ignore forecast. Maximize optionality.

5. Ren-Chain (Joseph) Wang: How Does ITRI Assist SME to Develop Green Technologies

Ren-Chain (Joseph) Wang is currently serving as the Deputy Director of the Planning Department of the Green Energy and Environment Research Laboratories of Industrial Technology Research Institute (ITRI) in Taiwan. Previously, he worked in the Energy and Resources Division of Industrial Economics and Knowledge Center of ITRI. His research interests cover the policy, industry, and technology of energy and environment as well as technology foresight.

Before joining IEK, Joseph also served in different units in ITRI. He has been The America Business Division Director in the International Business Center and the Deputy Director of Applied Chemistry Division of the Union Chemical Laboratories. In addition to the research and development experiences in ITRI, Joseph also served as the Senior Vice President of Chitec Technology Company and as a research Chemist in Shell Oil Company. Joseph obtained his Ph. D. degree in inorganic chemistry from the University of Illinois at Urbana-Champaign and his Bachelor of Science degree from the Soochow University in Taiwan.

ITRI's role in Technology Development for SME is a two way process; ITRI obtained the funding from the Ministry of Economic Affairs for its R&D funding and ITRI pay back 50% after the establishment of SME through technology transfer and after the SME pay the license fee to ITRI. In ITRI there are ITRI College and ITRI South, with two units Business Development Unit and Administrative Support Unit. There are also 1. Linkage Center with its Creativity lab; Nano Technology Research Center; Industrial Economics & Knowledge Center; Center for Measurement Standard. 2. Core labs with its Electronic & Optoelectronic Research Laboratories; Biomedical Technology & Device Research Laboratories; Material & Chemical Research Laboratories; Green Energy & Environment Research Laboratories; Mechanical & Systems Research Laboratories; Information & Communication Research

Laboratories and 3. Focus Center with its Display Technology Center; Service System Technology Center; Cloud computing Center for Mobile Application.

ITRI has 3 kinds technology collaboration 1. Early Stage Collaboration – Collaborated R&D, 2. Exclusive Licensing – Contracted Service and non Exclusive licensing, 3. New business investment – Others. Beside ITRI has also Licensing of Patent Combination and Foreign Patent Acquiring. ITRI has some examples of Green Technologies Transferred to SMEs i.e. Mobile recharger, High efficiency refrigerated display cases, Environmentally Friendly Packaging Foam, Waste Shell Utilization, Waste to Fuel:RDF-5.

In the entire SME activities it is obvious that 1. the Government support plays a very significant role in Green technology development particularly for resource limited SME. 2. A wide span of program is needed to provide substantial assistance to SME in Green Technology Development. 3. Green technology development also heavily relies on innovative combination of existing technologies; creative ideas and design; regulation and standards. 4. Platform facilities, expert services and pilot commercialization assistance are particular needs for SMEs in successful green technology development.

Questions and Comments from the Audience

No	Audience	Questions/Comments	Answers
1	Lauren T. Velasquez	Is there any limit to the funding that your government provide	Yes, but it is also depends on the prioritiy of the project

6. Dave Feldman : Adaption of Green Business by Incubator Programme

Dave Feldman is the Executive Director of Bethesda Green and CEO of Livability Project, a consulting firm dedicated to transforming communities into more livable places. He is the current and founding Director of Bethesda Green, a dynamic non profit of leaders from business, government and citizens that work together to reduce environmental impact, support business and green job growth and create stronger community ties. This

model initiative has the first green business incubator and education center in the DC/Maryland region. Prior to Livability Project, Dave was Consul, Trade & Investment at the British Embassy and led a team to help US companies establish operations in the United Kingdom and support UK companies exporting to the US. Earlier in his career, Dave served as VP of Sales and Marketing for wireless software company and was co-founder of an international consultancy providing strategic and market planning to the global IT industry.

In 2009, Dave was named one of "*The 25 CEOs You Need to Know*" by The Gazette of Politics and Business and as "Innovator of the Year" by The Daily Record. In 2010, the Montgomery County Council named him one of the *'40 Environmentalists in 40 Years'*. Dave holds an M.B.A. from the Robert H. Smith School of Business, University of Maryland in International Management and Finance.

His presentation on Adaption of Green Business by Incubator Programme presented the Green Business Incubators starting with the introduction to what is Clean Tech. followed by the Demand for Green tech, and the top ten US Cleantech Incubators. He further explained that the incubators have common themes i.e. Physical Infrastructure, Professional Management, Transparent guidelines for admission and progress, professional services and Solid financial base.

In his effort to develop green incubators, he established ties to local community, inclusion of government agencies of both economic development and environmental regulatory responsibility, influence in policy making but not political partisanship, formulate incubator plans based upon local economic and environmental priorities, inclusion of advisors and counselors with green business and sustainability expertise, and diversified funding base from government, business and community support as well as rent.

Bethesda Green launched in January 2008 as a non-profit incubator. The mission of Bethesda Green is "At Bethesda Green, we bring business, government and community together through programs and services to promote a healthy economy and sustainable living practices in order to reduce our collective impact on the environment". The strategies to achieve it are by incubated, educate and initiate. In Bethesda Green Incubator SMEs are prime focus, and they do Integration with education Center and Programs through common

funding and Joint initiatives, Culture of innovation, Collaboration is key, Launch space. SMEs of Bethesda Green are 1. Green, social responsible, sustainable, 2. for and not-for-profit, 3. Diverse sectors-IT, Architecture, consulting, media, marketing and distribution, 4. Large companies seeking local presence 5. Start up, early stage , and local 6. Products/Services-energy Efficiency, transportation, environmental stewardship, planning, design, neighbourhood reviatlization and recycling.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Lauren Teena Velasquez	How do you make the community take the Green Tech Incubator?	Meet and provide information frequently
2	Bui Minh Tu	How to promote green community?	Promoting green community by website, electronic, television, radio, and postcard
3	Manaek Simamora	Who support the Bethesda Green ?	Local Government, not national government

7. Jun Ichihara: Progress on CDM and Voluntary Offset Projects and Future Prospects

Jun Ichihara is coming from the Institute for Global Environment Strategies in Japan

In his presentation was about the CDM (Clean Development Mechanism) how it influence the nature by reducing the Green house Gas emission., and generates carbon credits (CERs) based on emission reduction, CDM aims also to contribute to sustainable development in host countries of CDM Projects and provides opportunity for new investment, new technology and additional revenue from carbon credits.

He further presented that there are typical type of CDM projects in Indonesia i.e. 1. Biomass: Biomass Utilization in Power Generation (i.e. Rice Husk, Bagasse fro sugar process, EFB from Palm Wood Chip), 2. Biogas: Waste water treatment (i.e. Palm oil process), Animal waste treatment. 3. Methane recovery & Utilization: Land fill gas collection. 4. Methane

Avoidance: Composting. 4. Fuel Switch: Switch oil to natural gas/biomass in Power Generation. 5. Energy Efficiency: Energy Efficiency in Factory.

He gave example of the current situation of using coal/diesel for heat/power in plant that emits amount of CO_2 While in the future when the CDM is applied using rice husk for heat/power in plant it will reduce the use of coal and reduction of CO_2 emission and an additional income because using rice husk there is no emission of CO_2. Another example that was presented in the current situation is the treatment of Biogas there is no treatment for waste water from palm Process it is an open lagoon, thus the waste water emits methane (one of the GHGs) after the CDM is applied, adding digester/ treatment process of waste water, there is the reduction of methane emission.

At present demands for CDM and Small Scale CDM are very high, however there are barriers to CDM Development and CDM Reforms such as 1. CDM Process is lengthy, 2. Transaction cost for CDM Process is notlow esp. For projects that generate small credit, 3. Limited Progress of Forestry CDM. 4. Uneven distribution of CDM projects among countries/regions, esp. LDC where some countries dominate the market. While the CDM Reforms has 1. Introduced new guidelines and rules to make project development simplified and effective e.g. Programmatic CDM, Microscale CDM and 2. Standardized Baseline. The programmatice CDM (pCDM) allows a group of similar activities to be implemented as CDM, it can take place in different locations even multicountries over long period of time (some projects can join later) and it is potentially expected to reduce transaction costs. The pCDM is suited for small-scale, dispersed activities.

The Standardized baselines aim to provide simplified CDM methodologies, it can provide baseline and additionality of determanination as *ex-ante.* Standardized baselines allows project participants to deminstrate CDM eligibility and emission redcution in simplified manner.

It is concluded that Carbon market has been expanding, it may expand further or shrink due to the uncertainty of international climate regime after Kyoto Protocol, Utilizing Carbon market smartly could aid further introduction of green technologies, it is

recommended to follow the further development of CDM, Voluntary Carbon Markets and New Market Mechanism and Climate Financing.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
	Most of the audience	Is there a simple way of having a CDM	Not yet at present

General comments for all the presentations

1. Government involvement should be enhanced
2. Commitment of every economy and decision maker should be followed up
3. A center that can provide access to market in Asia is noted.

NOTES OF TRAINING SESSION

1. Dave Feldman : Incubating Green Business SMEs

Dave Feldman is CEO of Livability Project, a consulting firm dedicated to transforming communities into more livable places. He is the current and founding Director of Bethesda Green, a dynamic not-for-profit of leaders from business, government and citizens that work together to reduce environmental impact, support business and green job growth and create stronger community ties. This model initiative has the first green business incubator and education center in the DC/Maryland region. Prior to Livability Project, Dave was Consul, Trade & Investment at the British Embassy and led a team to help US companies establish operations in the United Kingdom and support UK companies exporting to the US. Earlier in his career, Dave served as VP of Sales and Marketing for a wireless software company and was co-founder of an international consultancy providing strategic and market planning to the global IT industry.

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His presentation **Incubating Green Business SMEs** was telling about Bethesda Green, Green Business Incubator, Services Offered, Results and Lessons Learned, Livability Project, and also showing the video about Bethesda Green Incubator, including the activities, the projects, the clients etc.

Bethesda Green launched in January 2008 as a non-profit incubator. The mission of Bethesda Green is "At Bethesda Green, we bring business, government and community together through programs and services to promote a healthy economy and sustainable living practices in order to reduce our collective impact on the environment". The strategies

to achieve it are by incubate, educate and initiate. After three years being operated the results are : 1) six companies hired total of 16 employees, 2) extensive support provided through contractors (30+) and interns (30+), 3) seven companies increased revenue at least 30 percent in 2010, 4) 0ver 20 partnerships formed, 5) operation improvements in financial and accounting controls, legal and payroll, and 7) refined marketing plans and initiatives, including websites, trade shows and referral networking.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Yustina Nita	How to connect businessmen, academe, government, SMEs and incubators coming together	Develop network and meet with stakeholders frequently
2	Setyono Yudo Tyasmoro	How to promote green community?	Promoting green community by website, electronic, television, radio, and postcard
3	Iswahyuni	How about the internship inside Bethesda?	High school students, universities, and incubator companies
4	Joko Sutrisno	Who support the Bethesda Green ?	Local Government, not national government

2. Jodi Sucipto : ESSENTIAL OIL as Bio Additive -A new Innovative Product

Jodi Sucipto founded PT Bio Pacific Energy in May 2009, and presently he is the CEO of the company. He graduated in MBA at SAN BEDA COLLEGE, Manila Philippines in 1998. Ever since, he had been working as plant manager and director at various private companies until 2009.

PT.Bio Pacific Energy is located at Jl.Taman Pahlawan Kalibata 8, Jakarta 12760 Indonesia. The **Vision** of the company is Bringing up essential oils to communities as part of energy strategy and actively preserving environment. And the **Strategy** to achieve it is by

Starting from outomotive user and broadening to mining industry and marine transportation.

The products are Bio Additive OCTANE-N® & CETROL-N15® for petrol dan diesel fuel and also can be used for for motor vehicle, bus, Truck, Power plant, Boiler, Dozer, Excavator, Marine transportation. Bio additive is a kind of renewable biomass that has high degradation rate and the low greenhouse gas emission that meets environmental standards. The function of bio additive are 1) Enhance perfect combustions in engine chamber, 2) cleansing and keep clean entire fuel system from carbon deposit, 3) recover power performance, 4) reducing engine temperature, 4) reducing exhaust emissions, 5) saving fuel consumption in average 20%, and 6) cost saving on engine maintenance.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Ahmad Nur Fathorudin	Could the products of Bio Pacific Co. be implemented into the vetiver oil processing (burner / boiler / distillery)	Basically it could, but not tested yet

3. Phung Kim Choy : Success Nexus, The Best Innovation Award 2011

Success Nexus Biofuel Sdn Bhd, Malaysia is a green company producing biofuel and renewable energy from agricultural waste, and providing services in bio-refinery facility and solutions. The company has been established as 1 Mobile Project of the Malaysian government program, and become as an exemplary of the commercialization of outstanding research results. The factory has been constructed at Lumut Industrial Park Perak, Malaysia started in 2002. The 2010 sales turnover was 350 thousand USD operating with 20 staff. SNB has transferred its innovative products across the border to Vietnam by transforming agricultural waste to multi-feed stocks.

Mr Phung, the CEO of SNB concluded his presentation by underlining important key factor for the success of his company : the success of commercialization of green innovation is dependent of commercialized banking support and government assistance for global

regional market where the waste of resources located. He also expressed his appreciation on this program since he could develop network to offer the innovative products to other APEC economies.

Questions and Comments from the Audience

During the discussion, the forum recommended that APEC continue support and workshop and training for Green SMEs, and establish an APEC Center for Green Technology based SMEs. The case of SNB could become a business model to nurture a green SME.

4. Ren-Chain (Joseph) Wang : Taiwan's Efforts on Helping SME to Expand Green Technology Market

Ren-Chain (Joseph) Wang is currently serving as the Deputy Director of the Planning Department of the Green Energy and Environment Research Laboratories of Industrial Technology Research Institute (ITRI) in Taiwan. Previously, he worked in the Energy and Resources Division of Industrial Economics and Knowledge Center of ITRI. His research interests cover the policy, industry, and technology of energy and environment as well as technology foresight.

Before joining IEK, Joseph also served in different units in ITRI. He has been The America Business Division Director in the International Business Center and the Deputy Director of Applied Chemistry Division of the Union Chemical Laboratories. In addition to the research and development experiences in ITRI, Joseph also served as the Senior Vice President of Chitec Technology Company and as a research Chemist in Shell Oil Company. Joseph obtained his Ph. D. degree in inorganic chemistry from the University of Illinois at Urbana-Champaign and his Bachelor of Science degree from the Soochow University in Taiwan.

ITRI consist of 2 main units, which are Business Development Unit and Administrative Support Unit. Under ITRI there are 3 centers which are **Linkage Center** (Creativity Lab, Nano Technology Research Center, Industrial Economics & Knowledge Center, Center for Measurement Standards), **Core Labs** (Electronic & Optoelectronic Research Laboratories, iomedical Technology & Device Research Laboratories, Material & Chemical Research Laboratories, Mechanical & Systems Research Laboratories, Information & Communication Research Laboratories, and Green Energy & Environment Research Laboratories), and **Focus**

Center (Display Technology Center, Service System Technology center, Cloud Computing Center for Mobile Application).

The business model of ITRI are **Service, Incubation,** and **Joint R&D** and three types of tenants in CIS Open Lab are :

- Age<18 months, Initial Capital<NT$80million, and Period=3+1 years
- Joint R&D Contract with Labs/Centers, and Foreign Entity Allowed
- IP/ Industry Association/ ID

Taiwan Government's Programs on Expanding Green Technology Applications are : 1) Low Carbon Island Field Demonstration, 2) Environmental Protection Technology Park, 3) Energy Efficiency Labeling/Energy Saving Certificate, 4) Subsidy for Purchasing Products with Energy Saving Certificate, and 5) Green Electronics Integration Platform. ITRI's Efforts on Expanding Green Technology Applications are : 1) Motor Control Application Alliance, 2) Various Cooperation, Alliance, and Symposium, 3) Exhibition & Promotion, 4) 2010 Taipei International Invention Show & Technomart, 5) e –Journal & News, 6) EMS for Convenient Sores, 7) Waste to Fuel: RDF-5, and 8) Full-scale Applications of Wastewater Technologies.

Government plays a heavy role in helping the establishment, growth and expanding of green technology development particularly for resource limited SME. The approaches can be taken including: 1) Promote green technologies and its benefits through symposium, exhibition and trade show etc, 2) Form demonstration programs and dedicated industry parks, 3) Establish standards, certificates, labeling etc to differentiate and add value to green technology derived products, 4) Provide subsidy and incentives etc., 5) Provide information on regulations, restriction, and related information such as data bank etc, 6) Enhance collaboration through forming association and alliance etc., and 7) Eliminate legal restriction and even assisting on exporting green technologies.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Wiwiek Juliani	1. How many staff does ITRI have?	1. There are 5,625 ITRI's staffs, 1,219 Ph. D., and 3,059 M.S

		2. What is the legal status of ITRI ? 3. How does the government support ITRI ?	2. ITRI's legal status is private institution for research and research results commercialization that also functions as business and technology incubator 3. Government support 50% of the funding, so that ITRI could be the partner of government in developing green energy
2	Trieu Quang Kanh	What are the criteria for the green business start up company to be selected by ITRI?	The criteria are : 1) passion, 2) the green business has a social value or make better of the community, 3) provide fair chance for everybody (start up company as the candidates)
3	Asril Syamas	How to select the company for selling the research results?	In general, ITRI offers the patent to everybody, however they have to be sound in the company financial to assure the success of the business.

5. Ixa Fibriastuti : *Green compost and Plastic Recycle Company*

Ixa Fibriastuti**,** graduated from Food Science and Technology, Faculty of Agricultural Technology, University of Surakarta Slamet Riyadi in 2009. She began her career as lecturer in Physics and Microbiology at her almamater. Taking an opportunity offered by I-CELL BizDEC, a business and technology incubator at ATMI (Indonesian Academy of Mechanical Engineering), Surakarta , she founded a start up company together with her friends in December 2009.

The company, named Orsolindo, is a join venture doing business in transforming organic waste into organic fertilizer. In addition to organic fertilizer, Orsolindo processes plastic recycling, and has the plan to manufacture production machinery in the near future. The vision of Orsolindo is Empowering and increasing the welfare society through waste management and waste processing comprehensively, professionally and profitably. The missions are 1) Increasing and supporting the awareness and community participation, and

taking a part in waste management to decrease the waste, start from the source so that it can create a friendly environment, 2) Creating food endurance and social welfare by increasing the waste added value, and 3) Doing innovation of research by processing waste based on environment insight.

The main products are Green Compost (Organic Fertilizer) and Plastic Recycles (PP & PET). The second products are 1) Tools and machineries of green compost maker, 2) Three cycles of waste carrier (fiber-glass), 3) Three cycles of plantation employees, and 4) Training and Consultation (Promotion). The primacies of Green Compost are 1)The price of materials are cheap, 2) The main materials are easy to get, 3) The profit is big enough, 4) Simple Technology, and 5) Have adequate positive and sociologist. The primacies of Plastic Recycles are 1) Simple Technology, 2) Open demand, 3) Helping to get healthy and clean environment, 4) Need little employees, and 5) Have a wide net-working.

The next strategies are 1) Build a new firm PT. ORSOLINDO TEKNIK SEJAHTERA, 2) Create net-working of main material, 3) Increase customer's trust, 4) Look for addition financial capital, and 5) Broadened market

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Asril Syamas	The new start-up company has been incubated by specific business model. The idea is formulated by the incubator (I-Cell), then a group of interdisciplinary university graduates is called to be convened and making a sound business plan, finally angel investor is invited to support the business plan, and a new company is established and started to operate.	

6. Ahmad Nur Fathorudin : Zero Waste Vetiver Production

Ahmad Nur Fathorudin was borned in Garut on 13 March 1981. Graduated from Business Management College, Indonesian Telecommunication Co. Bandung, he continued his father vetiver business since 2005, and often attended vetiver training conducted by the association, private sectors, and universities to broaden as well as deepen his knowledge.

To expand the market, he promote his company through exhibitions, be it national, regional, or international such as Inacraft (2009, Jakarta), Dubai Global Village (2009, UEA), Jakarta International Expo (2010), Design Competition High Level Quality by Germany for essential oil (2010, West Java), SMEs Expo (2010, Jakarta).

He is also active member in Indonesian Essential Oil Association, West Javanese Essential Distillery Association, Samarang Creative Community, and Association to improve SMEs, and of course, IPB Incubator. His company has been awarded The Best Walkabout Project from Indonesian Telecommunication Co in 2006, Progressive SMEs from Garut District in 2008, The Bests Design Competition High Level Quality by Lupafak Germany in 2010, and The Best Technopreneurship from Garut District in 2010.

The company is located at Jl Raya Kamojang, Desa Sukakarya, Kec Samarang, Kab Garut, West Java, one of the main producer district of Vetiver Plant/Oil in the world. The vision of the company is to become a market leading company and source of vetiver reference in the world. Develop Eco-friendly product, maintaining and developing the concept of partnership and cooperation across the business chain to deliver value to stakeholders. The missions are 1) Manufacturer linkage product and one stop vetiver center for providing best services to the customers, 2) Producing high quality vetiver to sustain the historically well known Java vetiver in the world, 3) Developing Green Productions and Green Marketing Program trough zero waste vetiver concept, and 4) Creating partnership pattern with all stakeholders. The motto is ***" Came From Nature with Naturally Process " .***

The main product is vetiver oil, consists of Vetiver Oil Premium Quality, Vetiver Oil Regular Quality, Vetiver Oil Dark Quality, and Vetiver Oil Organic (on Developing). The total production of Vetiver Oil is 800 kg / month and exported to India, Germany and USA . The price of the Regular Quality is 170 USD / kg and for the Premium Quality is 210 USD / kg. The second products are Vetiver Craft (fashion and home decoration), Vetiver Seed / Plant

(Vetiver seed for Oil Purpose, Vetiver Seed for Craft Purpose, Vetiver Seed for Reclamation land, Vetiver Organic Plant), and Vetiver Waste (Vase, Organic Fertilizer, Photo Frame, Particle Board, Art Paper). According to the products which are produced, ***Zero Waste Vetiver*** is the business model of the company. The new concept of the products are vetiver soap, vetiver coffee, aromatherapy vetiver chocolate, vetiver candle aromatherapy, and aromatherapy oil.

Questions and Comments From The Audience

No	Audience	Questions/Comments	Answers
1	Jodi Sucipto	1. How long have you been starting business 2. How about the production cost and yield? 3. Market Area?	1. This business is generative business, started from my grandfather, my father and myself. I joined into this business in 2004 as Marketing Manager 2. The production cost for 1 kilo vetiver oil is about Rp. 1 500 000, and the price of vetiver oil is Rp. 2 000 000 per kilo. The yield of the processing from raw material is around 0.4 – 0.7 % 3. Export to India and France
2	Pung Kim Choy	What is your strategic plans in next 6 months ? It is better to be focus in business instead of having so many products to sell.	1. Extending the plantation from 120 ha up to 300 ha 2. Purchase of more distillery equipments