
Case Study Paper

55th ISOCARP Congress 2019

Cap-acity and Trade:

Vietnam Oregon Initiative Shared Climate Agenda

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Abstract

Climate change is an existential threat to all life on Earth. Humans are at the helm of emission controls and the underlying political mechanisms to avert worst case scenarios. As nations shift their policies and planning around this reality; there is an opportunity to redefine incentives across industries that promote clean energy and lower emissions in building, transportation and land use systems. In turn, workforce training and education across a broad international network can help ensure a just distribution of benefits as incentives kick in and markets transition. The Vietnam Oregon Initiative (VOI) officially launched in 2015 by Oregon's Governor Kate Brown and the Ministry of Foreign Affairs as a formalized partnership to advance mutual benefits through multi-sector exchange and capacity development. The Vietnam Oregon Initiative Climate Agenda (Attachment I) builds on this network to promote public policy solutions that enhance Oregon and Vietnam's market-based transition to clean energy and climate resilience.

Keywords

Climate change, Network Governance and Sustainability

1. Comparative Policy Background and Network Governance

1.1. Oregon and Vietnam Climate Policy and Methodology

Oregon has a legacy of environmental leadership starting with the passage of the first bottle bill in the U.S. in 1971. In 2018, after an updated bill passed doubling the deposit fee paid at time of purchase from 5 to 10 cents, Oregon hit a 90% redemption rate (4). Oregon Senate Bill 100 passed in 1973 marking establishment of the regulatory structure necessary for local and statewide land use planning and protections for farm and forest lands. In the 1990's land use coordination programs were integrated across state agencies to meet 19 state land use goals starting with the imperative of citizen involvement as well as maximizing density on lands within the urban growth boundary backed by data from mandatory studies to assess land use demands (economic opportunity analysis and 20 year population and housing demand studies). In 1993, Portland was the first city in the U.S. to create a local plan for reducing carbon emissions, now known as the Climate Action Plan. In the Plan's 2017 progress report that 83% of the identified 170 actions were on track and in fact translating

to a 21% carbon emission reduction to date. In 2016, Oregon passed the Clean Electricity and Coal Transition Act, a first-of-its-kind law to transition completely off of polluting coal-fired power while doubling the state's commitment to clean electricity -- like solar and wind -- to 50% new, renewable energy by 2040. Further, in 2018, Oregon's Climate Agenda was developed to strengthen the link between climate goals and work force opportunities and economic benefits in the transition to clean energy. The Portland Clean Energy Community Benefits Initiative passed as well in 2019 to invest money from a corporate tax into local projects communities of color who are disproportionately impacted by climate change. In 2020, if HB2020 passed it would have set emission limits to 80% below 1990 levels by 2050 and generated funds to aid in the disproportionate impacts of climate change.

In 2020, Vietnam will officially launch its power development plan and like Oregon work to advance renewable energy infrastructure (to 20% of the power mix by 2030) and transition away from fossil fuels in order to protect ecosystems which support clean water, air and soil. To promote these shifts in investment; ngo's are working at the household scale in rural communities to provide training and cost-effective strategies to increase energy access and efficiency and the knowledge to install and utilize renewable resources of energy. For example by 2030, the Million Green Homes program championed by ngo Green Innovation and Development (GreenID) aims to have one million buildings in Vietnam with solar PV rooftop systems paired with energy efficiency and other green solutions that benefit vulnerable populations and small and medium enterprises.

Building on Vietnam's recent climate initiatives to invest in renewables and transition to a greener economy and the State of Oregon's Climate Agenda emerges a chance to strengthen the Vietnam Oregon Initiative network, learn together and test mutual benefits.

1.2 Methodology

The shared climate agenda is a network governance approach to informal multi-sector partnerships that can nimbly respond to market incentives to leverage political, economic and educational resources. Collaborating through this unique state to country partnership aims to maximize market-based solutions to expand clean energy by broadening access to workforce training, low carbon lifestyles and amenities.

1.3 Vietnam Oregon Initiative Shared Climate Agenda

Promote Climate Change Policy and Build Up Leadership: Establish programs that build up Vietnam's leadership capacity and the scientific basis to implement climate adaptation and mitigation strategies. Work with members of the National Assembly, provincial governments, and line ministries such as the Ministry of Construction, Ministry of Planning and Investment and Ministry of Natural Environment and Ministry of Science and Technology to integrate policies into local planning, administration and investment strategies.

Action Areas

- Public sector training for climate leaders including decision-making and policy development which reduce coal dependency in power generation and align market-based programs to transition to renewable energy sources.

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- Engage Vietnam national and local governments to improve economic governance to advance community-based participation and investment in emerging carbon markets and technology that supports renewable energy power generation and storage.

Develop Clean Energy Workforce through Training and Education: Prepare Vietnam's workforce for the transition to a greener economy through training and education programs aligned with clean technologies and less carbon-intensive construction and production models.

Actions Areas

- University partnership development to host technical trainings and workshops for emerging technologies.
- Share renewable energy technology production and application models for large and small-scale installations of solar and wind power.
- Build private sector partnerships to promote knowledge transfer for integration of energy efficiency, green building science, automation and robotics.
- Share smart city applications for building and land use that promote quality of life and reduce environmental impacts on vulnerable populations.

Expand Sustainable Product Development: Improve the performance and quality of businesses in Vietnam and Oregon to compete globally in sustainable product development.

Action Areas

- Expand the application of life cycle assessment and financing tools to promote viable clean technology products and services across multiple sectors including manufacturing, agriculture and forestry.
- Increase market access to energy efficient appliances for residential and commercial use.
- Advance sustainable transportation system models that increase smart, multi-modal transportation options including electric vehicles and bicycle infrastructure.

2. Oregon Case Studies; Emerging Green Markets Tied to Urban Resilience and Rural Working Lands

2.1. Oregon Renewable Energy Policies

Oregon Renewable Energy policies for utilities paired with energy efficiency in Oregon are some of the most aggressive standards for cutting greenhouse gas emissions in the U.S. Since the 1980's (following passage of the Northwest Power Act), energy efficiency was identified as a cost-effective priority for the region. Paired with SB 1149 passed in 1999, Oregon's largest utilities were required to invest in energy efficiency, using utility revenues collected through a public purpose charge. By mandating that utilities supply 50 percent of customer demand with renewable energy by 2040, Oregon created one of the first renewable portfolio standards in the U.S. Unfortunately, Oregon undermined that target by classifying a number of "dirty" energy sources as renewable such as sewage gas and manure digesters and allowing the use of a compliance mechanism to purchase credits with no monitoring oversight (2). Despite these shortcomings, by 2019 more than 55,000 workers in the clean energy sector, 50 times as many as of those employed by fossil fuel industries, and this number is growing 11% annually – faster than Oregon's statewide average. These jobs typically can't be outsourced, are often accessible with a technical degree, and 11,000 of them are located in rural communities.

Oregon has invested significantly in energy efficiency programs, in recognition of the need to promote lower energy bills, protect public health and safety, improve environmental benefits, stimulate sustainable economic development, create new employment opportunities and reduce reliance on imported fuels. Oregon's ngo Energy Trust, stands out for its return on investments in energy efficiency programs which have shown to provide \$3 in cost savings for every \$1 in program fees. Since its inception in 2002, Energy Trust has led over 700,000 home and building improvements from improvements in insulation and heating and cooling efficiency. Through this work utility customers have saved over \$7.6 billion on utility bills, installed 13,000 renewable energy systems and saved or generated enough energy to fuel a clean energy power plant. \$6.3 billion of that funding has been directly added to the economy with 22.8 million tons of carbon dioxide avoided equal to removing 4 million cars from the roads for a year (3).

There is a workforce development component which has proven valuable in retrofitting homes and commercial buildings for energy efficiency. Clean Energy Works (now Enhabit) was a collaborative effort to align energy efficiency outcomes with low-income households who needed the savings most and retooling an underutilized workforce to implement the plan. Clean Energy Works saw the following results:

- Over 20,000 families were served with results of more than 30% energy savings per household
- Energy retrofits were increased by eight times, from less than 200 per year to about 1,600 per year.
- Accessible to 82% of the Oregon population; the program significantly increased capacity to respond to local needs throughout the state.
- There was a high return on investment, over \$100 million in economic activity and the creation of 500 new jobs

Governor Kate Brown further elevated Oregon's leadership on energy initiatives when she signed an executive order which required new state-owned buildings to be carbon neutral in 2022; all new buildings to be solar ready by 2022; and new residential buildings to "zero energy ready" starting in 2023.

2.2. Oregon Agriculture Policy

Oregon Agricultural policies are grounded in a state-mandated approach to protecting high-value farm and forest "working lands" through a scientific suitability analysis of soils. Oregon has some of the most productive soils in the world both due to natural (geologic conditions) and now because of strict classification system to keep these soils in use. The State of Oregon requires rigorous testing in order to determine appropriate land use designation to ensure areas contained by urban growth boundaries for high-density development are often on degraded soils and or soils with low agricultural or forestry values (5). Not only does this protect natural carbon sinks (trees, plants and soil), it also promotes density for compact communities increasing access to basic amenities (transit, water, sewer, etc). In Western Oregon alone, scientists predict that Oregon's urban growth boundary and scientific approach to land use has contributed to carbon storage equivalent to a reduction of 1.7 million metric tons of carbon dioxide (CO₂) emissions per year (6).

Further, these productive soils contribute to a robust local food economy. "Oregon's location quotient for food production is 2.6, meaning the concentration of agricultural jobs is two and a half times what it is nationwide. This is primarily driven by crops (grains, fruits, vegetables, etc.) and fishing. Oregon's location quotient for food processing is 1.5 meaning the local concentration 50% larger than in the average state." Knowing rural communities especially with resource-dependent economics are especially sensitive to the effects of climate change and increases in fuel prices—expanding the use of soil testing as a basis for local land use controls across the U.S. and Vietnam could rapidly and significantly expand carbon sequestration.

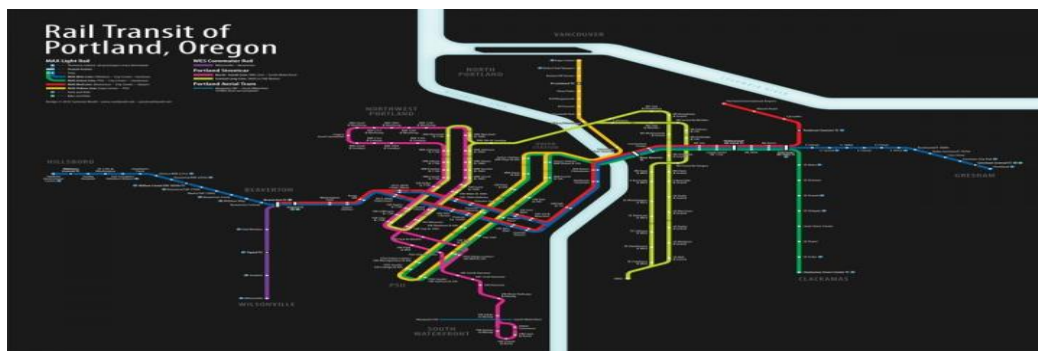


Picture 1 Oregon's Urban Growth Boundary has protected productive soils from being paved over by inefficient development

2.3. Oregon Transportation Policy

Oregon Transportation policies have targeted systemic reductions in fuel emissions resulting in over 1 million tons of carbon emissions reduced since the passage of Keep Oregon Moving (HB2017). Transportation remains the number one contributor to greenhouse gas emissions (about 20%) primarily from trucks and single-passenger vehicles in Oregon despite major investments in clean fuel standards and electric vehicle rebates. Compact communities that increase the density of neighborhoods within the urban growth boundary and require developments to be transit-oriented best support fewer vehicle miles traveled and improve walkability, bikeability and transit ridership rates. The next phase for transportation policy is to curb emissions in urban areas with be congestion pricing to minimize commuting times, traffic delays and idling.

Nationally, studies show that investment in public transit not only contributes to local quality of life; it also supports tens of thousands of manufacturing jobs through its supply chain. There are over 2,700 manufacturing companies producing parts for public transit systems nationwide. The American Public Transportation Association found that 15,000 jobs are tied to every billion dollars invested in transit capital from construction to upgrading level of service (8).



Picture 2 Map of Portland's efficient light rail system, one of the most developed in the U.S.

3. Vietnam Case Studies; Emerging Green Markets with Value Chain and Green Job Creation.

3.1. Vietnam Land Use and Development Policy

Context: Existing green policies and real estate market development



Picture 3 Solar energy used for aquaculture farm in Phu Lac.

In the last decade, the multi-function buildings are becoming popular in the cities and their growth is proportional to the fast urbanization, especially the outstanding thriving of leading

real estate investment companies including Vingroup, Novaland group, Dat Xanh Company, Vihajico Company, FLC group etc. with the larger-scale real estate projects like Tay Mo smart city, Time city, Ecopark, etc. in the Northern and Sunrise city view, Lakeview city, Aquacity, Palm marina etc. in the Southern. These mixed housing and hospitality projects provoke the increasing demands of energy, water and waste treatment resulted from the blooms of their commercial retails, housing, food centers while the public infrastructure presents the poor capabilities due to the low investment and inadequate planning.

The concept of Green building (GB) embraces the principles of low environmental impact through greater energy efficiency, low energy demand, reduce water usage, improve indoor quality and minimise construction waste [1]. Green buildings with green certificates have been implemented in many countries around the world. The green building certificate has been implemented by 6 countries and the LOTUS green building certificate has been provided by the Vietnam Green Building Council with an increasing number of buildings getting LOTUS certificates so far. Beside of LOTUS certificate, the Vietnam Green Building Council provides the certificate of LEED (Leadership in Energy and Environmental Design) for building projects in Vietnam [2].

In nearly 10 years of development, the number of buildings registered to get LOTUS certificate increased with 50 building projects in 2018 including different types like mixed use, hospitality, retails, residential buildings, office, industrial, school [3;4]. This number still is behind of the growth of buildings provided by the current market. The Green Buildings has been mainly grown in two big cities, Hanoi and Ho Chi Minh City, and currently tend to expand to other cities where the tourism activities and services are growing with high rate. For example, the Novaland group planned to provide to market in 2019 the new big hospitality and building projects in Phan Thiet, Nha Trang, Vung Tau, Bien Hoa etc. [5]

Beside of the initial development of green building certificates like LOTUS, LEED, the renewable energy, especially solar energy, has been strongly promoting by the Vietnamese government in responding to the national contribution commitment of the reduction of greenhouse gas emissions under United Nations Framework Convention on Climate Change 2015. The national legal framework to promote the development of renewable energy has been approved by Prime Minister with Decision 02/2019 / QĐ-TTg to enable the solar rooftop power solar power, Decision 11/2017 / QĐ-TTg to enable the mechanisms of investment of solar power plants. The regulation on prices of buying solar energy by regions has been drafting and finalizing to promulgate soon [6]. The promotion of green energy in different industries also supported by two other top legislations including Decision 1393/QĐ-TTg on endorsement of National Green growth strategies and Law of National Environment Protection No 55/2014/QH13 promulgated by National Assembly which implies the significant use of energy efficiency and renewable energy in the economic leverage as the key feature to protect the environment.

This national legislative framework created a breakthrough to boost the development of solar energy market in Vietnam, opening up many potentials for the use of solar power and energy efficiency for buildings and infrastructure utilities in mixed retail and residential projects. The small and medium cities are considering as the emerging markets with smaller scale of real estate which are mostly the hospitality and retail projects.

In reality, even the increasing number of LOTUS/LEED registrations of building projects, the motivation of using the green building certificates in the real estate market is not noticeable in bringing the benefits to the investors. The use of those green certificates faces several challenges such as entailing the upfront cost in the total investment when adopting the green certificates and then increasing the price of units which is always unlikely for the customers, lack of environmental awareness of residential results the absence of pressure to adopt those certificates and regulation enforcement at grassroot level.

Market driver: the inter-connected benefits among green building certificates and value chain and community health.

The wider application of green building certificates for mixed housing and hospitality projects will generate the business opportunities for services and products used in constructing the green buildings such as using the natural materials and designs to minimize the energy use of building, the high-performance electrical devices and smart monitoring devices to optimize the building's energy consumption, the green mobilities for residential buildings in moving to their offices, shops and supermarkets etc. Using the green input resource spurs the opportunities of minimizing the on grid electricity consumption of building amenities and increasing the use of green energy.

In the context of transition of electricity production market with the increasing participation of the private sector with focus on the renewable energy, the electricity price is being strongly adjusted by the Vietnamese government in the direction of market based pricing of power. The meaning of resource efficiency is becoming significant for all of activities and outputs of enterprises. The buildings with green services and facilities with green inputs resources will bring the meaningful benefits to the building owners. The real estate investors could get better public and customer trust through improvement of environmental performance of buildings against certain targets, lower operational costs by conserving input materials and energy efficiency, minimize waste and enhance their compatibility with high standards related to health and safety for buildings. The adoption of green certificates with healthy and safety standards contributes to diminish the risk of liabilities and health insurance claims for residential living in the buildings.

The typical instance of Ecopark, one of biggest mixed retails and residential township, recognizes the significance of eco values and is trying to improve their eco township through doing the valuable actions like as the campaign to zero waste, use eco buses and electric car for internal and external transportation, and digital technology application for township infrastructure management etc. which aims to use the green standards to bring more and more eco values to their residential communities. [7].

It's time of the maturing opportunities for real estate companies to consider the benefits of high investment costs and low operation costs with friendly environment impacts instead of low investment with damaged environmental impacts. Breaking the financial barriers with the conflict between investment cost and environment values also contributes to this driving development of the green building market.

Potentials of green jobs generated from value chains of real estate market

The obviously current impacts of climate change and air quality in the major cities are clearly showing the signs of degradation and boosting the real estate investors to consider their vision of eco friendly products and services in the market segment of housing, commercial building and hospitality projects to improve their competitiveness. Promoting the development of green buildings and non- fuel infrastructure facilities or seriously considering the green values created in the process of operation will bring the insights for development of green jobs and green technical skills.

Even there are many business opportunities for this green building market but it exists the huge gaps of resources. As emerging markets in the world, the important driving resource is the skillful workforce who contributes as qualified inputs to the services or products of enterprises. In this workforce market, the improvement and enhancement of green skills is critical factor to produce the green buildings with green certificate adoption. The green skills of this market relate to the areas of technical design, engineering, procurement, management, material manufacture and supplies, efficient equipment and appliance manufacture and installation etc.

The value chain of services and products generating from the development of green buildings are significant element that enhancing the development of green labor market in Vietnam. In nearly a decade of green building development, the green skill labor market has still under developed and fragmented then can not play as a driving actor.

The fundamental reason which explain this low development of green workforce comes from the intrinsic issues of education of universities which are still developed behind of market growth and needs [8]. Green knowledge and skills of vocational training programs are scattered in the most of industries.

The second reason comes from the gap of local green technologies which always concentrate in the big companies and in big cities where there is always providing a high incomes and job opportunities for this high labor market. Small and medium local suppliers are almost unskilled and knowledgeable about green technologies due to their inability to invest to those technologies and hire those qualified labors. In addition, small local suppliers are unable to access the green technologies and materials which only reach their low prices once importing the huge bulks.

Finally, the dissemination of green knowledge only aims to improve the awareness of energy saving, reduce energy consumption, use high energy efficiency devices, monitor energy consumption but not yet targets to the objective of identify the career direction and education of young generation. The communication programs are focus on short-term implementation and have not really improved the attitude and made consensus among residents and communities. In reality, most of students and their parents could not reach any information and perceive about the green career market when identifying their career education even they could collect those career information through consultancy education centers.

Recommendations to develop green skills for greening real estate development project

Building the green workforce resource to respond to the market demands is not easy and should be approached and implemented by different inclusive pathways. In vertical

direction, they should be enhanced through the comprehensive curriculas from vocational training programs to undergraduate and graduate education programs and frequently update the professional training programs for targeted officials of local governments and company staff. The integration of green values into the education schools needs to be addressed through vague projects for students to improve their awareness and changing their routines. At the grassroot of policy making and implementation, the improvement of abilities of policy makers should be taken frequently with incentives to create their self motivation and innovative ideas. In horizontal direction, the knowledge and skill improvement needs to undertake in cross relevant sectors from material manufacture, engineering and services to banks and financial institutions. The inclusive campaigns with demonstration projects are necessary and bring the impacts and public influences to the residential to improve their awareness of green values for environment protection and change their routines from using the low efficiency to high efficiency appliances and mobilities, from using the polluted products to eco-friendly products (for example phasing out the plastic products in the habits of shopping and food storage).



Picture 4 Ecofarm greenhouse in Tan Thanh commune, Thanh Binh district, Dong Thap province.

3.2. Vietnam Agricultural Policy

Context: Mekong Delta region, the biggest agricultural market in transition process.

Mekong Delta of Vietnam includes 13 provinces (Long An, Tien Giang, Dong Thap, Vinh Long, Tra Vinh, Hau Giang, Soc Trang, Ben Tre, An Giang, Kien Giang, Bac Lieu, Ca Mau, Can Tho) in which their overall agriculture sector plays a role of key driving economic actor of the region. In period of 2016-2018, the total agricultural production value accounts for 34.6% GDP of national agricultural production [1]. The agricultural transition towards to join the global value chain of high quality products is realising as the long-term vision of Vietnam Government which attempts to marginalise the economic gains and attract the great investment for Mekong Delta region. Strategies with actions to promote this agricultural transition are built on the involvement of key actors including the state, enterprises, farmers and scientists for the production, processing, packaging and market consumption [2]. The production steps including the breeding development, cultivation and processing stages (preliminary processing or finished products) are improving through the supports of enterprises and scientists in order to response to the international and local market standards. At the national level, the Prime Minister's Decision 80/QD-TTg on promoting

consumption of agricultural products through signing a wholesale contract has made a big step forward the promotion of agricultural products in the new markets. In addition, land pooling policies for agricultural land enables the farmers in expanding their farm and production scale.

The regional agricultural extension policies of the provincial governments in the Mekong Delta region aim to improve the knowledge and knowhow of farmers and enable the provision of materials and accessibility to financial resources when upscaling their business and production.

The edging insight is visible in the Mekong Delta agriculture with the remarkable and very active partnership involvement of the leading research institutes and universities such as Can Tho university, Cuu long Delta Rice research Institute, Institute of Agriculture Science for Southern of Vietnam etc. in all steps from breeding stage to cultivation and harvest through transferring the technologies and knowhow to improve the quality, reduce the use of fertilizers and water.

Besides, Mekong Delta provincial governments are improving step by step the legislative framework and investment environment to engage the private sector and foreign investors into the agriculture transition and the region's agricultural development.

Market driving actor, Agriculture 4.0 is the combination amongst ICT technology and renewable energy and energy efficiency for processing and cultivation to reach the high quality market based agricultural products. [3]

The development and maturity of ICT 4.0 and bio-agricultural technologies from advanced countries such as Israel, Japan etc. and those technologies are expanding in Vietnam's agriculture and especially in the Mekong Delta region. The ICT application plays a significant role as the actor no 5 in driving the agricultural growth. This actor is bringing the efficiency for the agricultural production in responding to the healthy and safety standards like Vietgap, BMP, ASC, BAP etc. and also allows to reach the high yield due to minimize their dependence on the season, climate and nature. The of greenhouse cultivation technology, solar energy and energy efficiency (LED lamps, pumps), and ICT tools of monitoring the quality of water, soil, fertilizers and agricultural waste now is popular in the Mekong Delta provinces. The successful story of organic agricultural farms of Ecofarm represents the new trend in the agriculture sector with significant projects of 84 ha of organic vegetable farm in Kien Luong district of Kien Giang province, and 8000 m2 of organic vegetable farm in Thanh Binh district, Dong Thap province [4]. Other story is the farms of My Dong Agricultural Coop No2, the farmers use smart fertilisers together with other harmless biological product and water level measuring equipments which use the electricity generated from solar energy to monitor the rice plants at each stage of growth [5]. The use of clean energy for the entire system allows the inclusive changes and use of resource efficiency for agriculture through saving manpower, materials, electricity and water.

Regard to the environment conservation, the system of collecting agricultural waste to produce the biogas and re-use in the process of livestock cultivation also studied and implemented in some small farms in Mekong region but still need to improve in term of technology. The biogas production and broad use in the agriculture allows to complete the

closed circle from livestock, fruit and vegetables cultivation and aquacultural production in Mekong region.

There still exist a great potential market for exploring the renewable energy use in the process of packaging and storing stages to improve the supply of products for the domestic market through prolonging the freshness of the product without use of preservative chemicals.

Mekong Delta region is also the region which is favorite the development of numerous solar energy plants since they reach around 2200 – 2500 hours of sun per year [6]. In this regard, marginalising the land use in the both sectors including agriculture and energy is important to avoid the conflict of land use. Recently several international organizations and companies have begun to study the dual use renewable energy and cultivation both for rice and vegetable crop or aquacultural farm [7-8]. This dual use aims get the two-in-one effect, offgrid electricity for agricultural development with high productivity while curving off the high electricity demand on the national grid.

Potentials of green jobs from value chain of eco agriculture development

The agriculture 4.0 is the new trend and emerging market in Mekong Delta region. This emerging market demands a range of energy services which need to tailor with the different types of agricultural farm. The local leading universities and research institutes mostly are focusing on the edging technologies to support the agriculture activities like the breeding, cultivation and harvest but still not address yet to supplementary services like energy and ICT application.

Meanwhile the abilities of local energy service companies are still restricted. Especially it exists the wide gap of information dissemination of the potential benefits of solar energy use for cultivation and the lack of training programs for farmers. Except the relatively large companies, most of famers still keep their cautious to invest the solar energy for their own farms.

Recommendations of green education for agriculture 4.0 development:

Again, the inclusive pathways to enhance the fundamental education of universities and vocational schools are the key elements to bridge the gap of green skillful labor force in the agriculture market. The local universities and vocational schools need to address to the integration of green technology curriculas and broadly comprehensive training programs which combine the greenhouse technology, energy services and ICT application for agricultural sector in Mekong Delta region. Moreover, the development of community based agriculture education programs and productions with the own and share model of green energy investment (solar and biogas energy) contributes to build up a community based branding of clean agriculture while maintaining a water management and minimizing the agriculture waste for the environment.

Together, the VOI Climate Agenda promotes a package of policy mechanisms and industry practices to build a learning and implementation network across diverse sectors and networks. It will take shared leverage through the Vietnam Oregon Initiative to move political strategies, investments and education towards a more prosperous future.

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