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Based on interdisciplinary problem analysis and fundamental research, effective infrastructures for research, characteristic value determination, training, education and the transfer of scientific results into Vietnamese construction and planning practices are developed.

Subproject: socio-economic dimension, governance, dissemination management

Introduction

In terms of academic work, Subproject 2 brings in the social, economic and political aspects of building use and the building's life cycle in Vietnam.

Theoretically, University of Hamburg follows a multi-level transition-towards-sustainability approach that contains two parts:

- The academic part: Collection of basic socio-economic information, representative data on the resident's perspective on Vietnamese high-rise buildings as well as the examination of stakeholder and governance structures in Vietnam's construction sector
- The outreach part: The establishment of the Competence Centre for Sustainable Building (CCSB-VN) at the National University of Civil Engineering, the conduction of stakeholder workshops, a Handbook for Green Living, Energy Efficiency, Durability and Health, as well as public conferences and a Vietnamese-German Scientific Advisory Board.



Figure 1: Source: Schulz in Waibel (2015)

WP 1.1 Basic Data: Society and Energy Policy in Vietnam

The objective of this WP is to create a consistent information and data basis for all WPs.

The database:

- supports the systematic analysis of literature, reports, media and statistical data.
- Collects data about the social and economic structure of Vietnam, energy tariffs, taxes, as well as available incentive instruments and the like is collected.
- Includes also expert interviews with key players from government agencies, developers, designers, engineers and NGO representatives.

Milestones and deliverables: Database on Society and Energy Policy in Vietnam; Status report

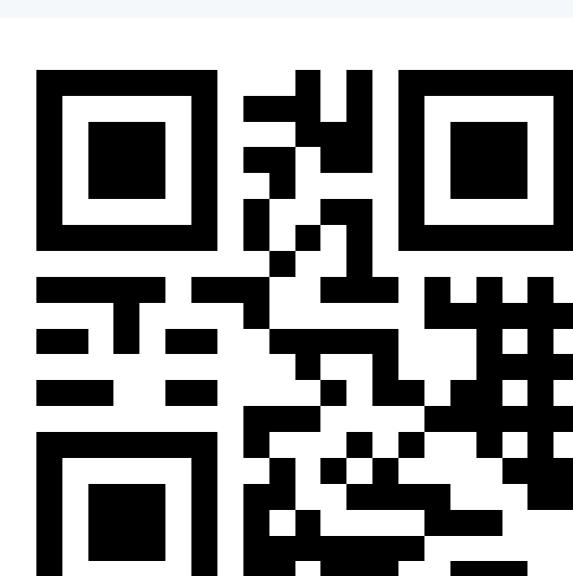
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WP 1.2 Stakeholder and Governance Structures in Vietnam's Construction Sector

The objective of this WP is to create a consistent information basis for all WPs. In addition, it analyses usable governance-instruments and therefore prepares WP 2.1 and WP 4.1.

The main scientific tool is a SWOT analysis:

- Based on the existing participation structures and the legislative regulatory framework for energy- and resource-efficient construction; information about civil society and business-related initiatives in Vietnam
- Identifies working approaches and instruments for a successful governance framework for Vietnam through a comparative and empirical approach.

Milestones and deliverables: SWOT analysis



Figure 2: Analytical frame of a SWOT Analysis

subproject leader



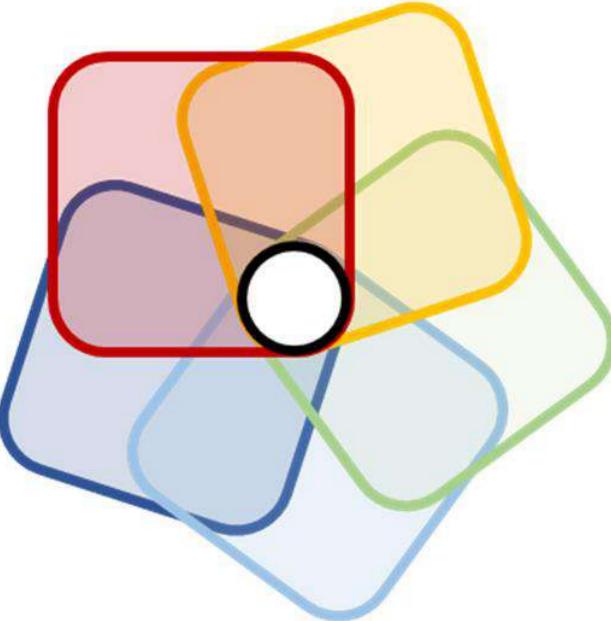
Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG

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Climate-adapted Material Research for the Socio-economic Context in Vietnam

As a result of the rapid economic development in Vietnam, lifestyles and the needs of residents change in new building typologies with materials, constructions, and supply systems that were not previously common. This development leads to far-reaching issues with structures and building physics, especially under the demanding climatic conditions. This hinders the implementation of energy-efficient and sustainable construction practices in the local construction market. Consequently, the German-Vietnamese project CAMaRSEC supports the implementation and further development of energy-efficient, resource-efficient and sustainable construction practices.

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WP 1.3 Household Survey

The aim is to analyze the living context, living conditions and lifestyles in Vietnam's new residential high-rise buildings – a still rarely researched subject.

| ENERGY SAVING HCMC SURVEY | | Page 1 of 26 | |
|--|----------|---|-------------------------|
| Project name | JOB NO. | VERSION 3 | SP No. |
| Energy Saving | 2009-542 | QUESTIONNAIRE | _____ |
| Title of survey: | | | |
| Name of organization: | | | |
| Address: | | | |
| Dien thoai/ Phone number: | | Nha _____ | Văn phòng _____ |
| Email Address: | | (Office) (Mobile) | |
| Ngày/ Date: | | 0 | 1 |
| Giờ/ Time: | | 0 | 1 |
| Tháng/ Month: | | 0 | 1 |
| Năm/ Year: | | 0 | 1 |
| Tên PVV/ Interviewer name: | | STT PVV _____ PHÒNG KIỂM ĐỊNH _____ LTT NGHỆ THÔNG TIN _____ Số ID _____ | |
| Tên người viết/ Supervisor name: | | Chủ tịch, xin chỉ rõ _____ Others, please specify _____ | |
| Ký tên/ Signature: | | Ký tên/ Signature _____ Ngày/ Date _____ | |
| Giảm sốt/ Cooling system: | | Không/ No _____ | Có/ Yes _____ |
| Kết quả/ Result: | | Kết quả/ Result _____ | Chữ ký/ Signature _____ |
| Ngày/ Date: | | Ngày/ Date _____ | |
| I declare that the information has been personally carried out by me with the respondent. I further declare that the respondent, whose name and address appear above, was unknown to me until the interview. It is guaranteed that the information provided is true and complete. I declare that I have conducted the interview in accordance with the IMA's Code of Conduct and instructions supplied to me for this study. I understand that information given to me during the interview must be kept confidential. | | | |
| Signature _____ | | Date _____ | |
| QUESTIONNAIRE, March 3rd 2009 | | | |

| ENERGY SAVING HCMC SURVEY | | Page 13 of 26 | |
|---|--|---------------|-------|
| SHOW CARD | | | |
| Q18 | Ánh/ light thường là dùng những cách thức nào để cảm thấy dễ chịu hơn trong ngôi nhà của mình? [IMA] | Code | Route |
| Q18a | Thẳng/ straight: cửa và cửa sổ | Yes | No |
| Q18b | Sử dụng quạt thông gió | 1 | 2 |
| Q18c | Sử dụng điều hòa nhiệt độ | 1 | 2 |
| Q18d | Đi chuyển tới những nơi khác nhau trong ngôi nhà | 1 | 2 |
| Q18e | Changing the location in the house | 1 | 3 |
| Cách khác, xin chỉ rõ _____ Others, please specify _____ | | | |
| SHOW CARD | | | |
| Q19 | Mức độ ồn ào trong nhà chung cư của anh/chị? [IMA] | Code | Route |
| Q19a | Rất yên tĩnh: từ ngày/ linh/ đêm | Yes | No |
| Q19b | Chỉ yên tĩnh vào ban đêm nhưng ban ngày ồn ào | 1 | 2 |
| Q19c | Ôn ào cả ngày lẫn đêm | 1 | 2 |
| Q19d | Đo ôn ào từ bên ngoài/ tôi thích thoa thoảng khói nồng | 1 | 2 |
| Q19e | Trong giờ/ ban ngày/ ban đêm/ ban đêm | 1 | 2 |
| Q19f | Tôi muốn tiếng từ/ bên ngoài/ gần bờ | 1 | 2 |
| Q19g | Tôi vừa lắp đặt cửa sổ hai lớp (Eurowindow), vì vậy nhà tôi không bị ôn nähr/ rít hàng xóm | 1 | 2 |
| Q19h | Ý kiến khác, nếu rõ _____ Others, SPECIFY _____ | 1 | 2 |

Figure 1: Section of preceding household survey.

The household survey:

- is a representative quantitative household survey and the highest level of the study cascade together with WP 1.5 and WP 3.2
- is conducted among 400-500 households in Hanoi and among 400-500 households in HCMC
- covers demographic, social and economic data and the resident's behavioral patterns, their perception of the apartment and their awareness of sustainability issues

Milestones and deliverables: Household survey; raw data; Status report

Reference

Waibel, Michael (2009): Megacity Research Project TP. Ho Chi Minh / Vietnam, Work Package 9 Energy- and climate efficient housing typologies, Report.

WP 4.1 Instruments and Guidelines

The aim of this WP is to develop a concept for a holistic regulatory framework in the field of energy, resource-efficient and sustainable construction.

Based on the research carried out in WP1 and WP3, and in close consultation with local actors, recommendations for the further development of guidelines and standards in the field of energy, resource-efficient and sustainable construction are developed.

The recommendations for actions are tailored to the scope and development of the research facility planned in WP 3.1.

Milestones and deliverables: Roundtable workshops, concept paper

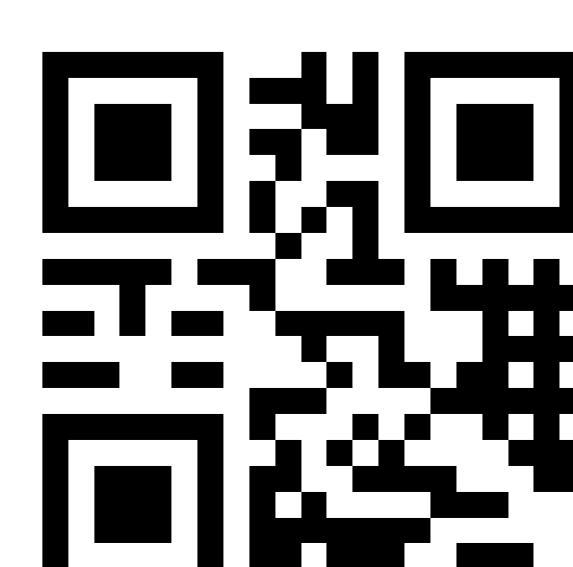
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WP 4.3 Competence Center for Sustainable Construction

Knowledge about sustainable construction in Vietnam is still limited due to scattered expertise and, yet, not fully exploited synergies between science and industry.

The aim is to establish a Competence Center for Sustainable Construction in Vietnam (CCSB-VN) as a cross-sectoral institution at Vietnam's leading research institution in the field, the National University of Civil Engineering (NUCE) in Hanoi.



Figure 2: Sign of the CCSB-VN

Tasks of the Competence Center:

- It will bring together expertise from NUCE's relevant departments and other research institutions,
- it will disseminate the knowledge and products of CAMaRSEC.

Milestones and deliverables: Roundtable workshops, feasibility study; local project coordination office and National Competence Center for Sustainable Construction in Vietnam

WP 5.4 Workshops for Stakeholder Engagement

This Package aims to link CAMaRSEC's activities to established key actors of civil society and businesses in Vietnam to disseminate the research outcome and products.

Workshop partners:



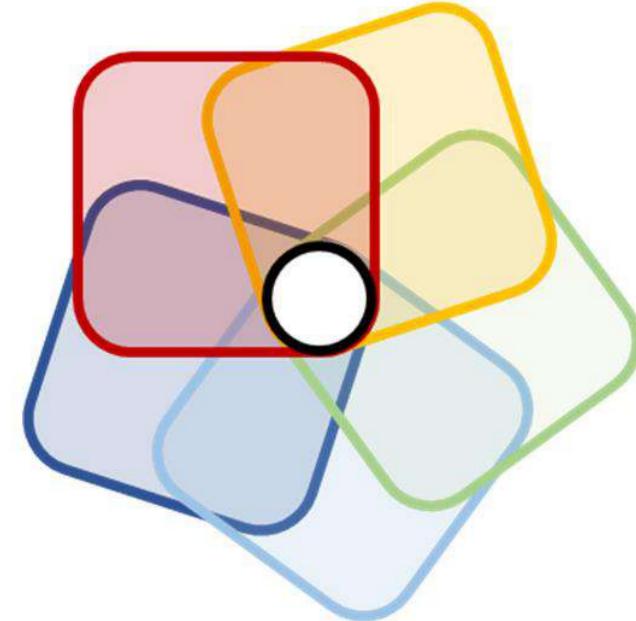
Milestones and deliverables: stakeholder workshops; PR video clips and press releases.

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WP 5.5 Handbook for Green Living, Energy Efficiency, Durability and Health



Figure 1: Preceding publications.

The objective of this WP is to communicate sustainability goals in the construction sector to a broader public.

The handbook, published in Vietnamese and English language, communicates in a comprehensive and accessible way to laymen.

Milestones and deliverables: Handbook



Figure 2: A look inside the Handbook for Green Housing

References

Waibel, M. (ed.) (2013): Handbook for Green Products. High-Quality Company Solutions towards Climate-Adapted Housing and Energy-Efficient Buildings in Vietnam, Edition 2: Technical Constructive Green Housing Products and Green Services. Transport Publishing House, Hanoi/Vietnam. 68 pages.

Hesse, C., Schwede D. & M. Waibel (eds.) (2011): Handbook for Green Housing: Climate-Adapted and Energy-Efficient Building Solutions for Ho Chi Minh City, Edition 1: Town Houses. Transport Publishing House, Hanoi/Vietnam. 68 pages.

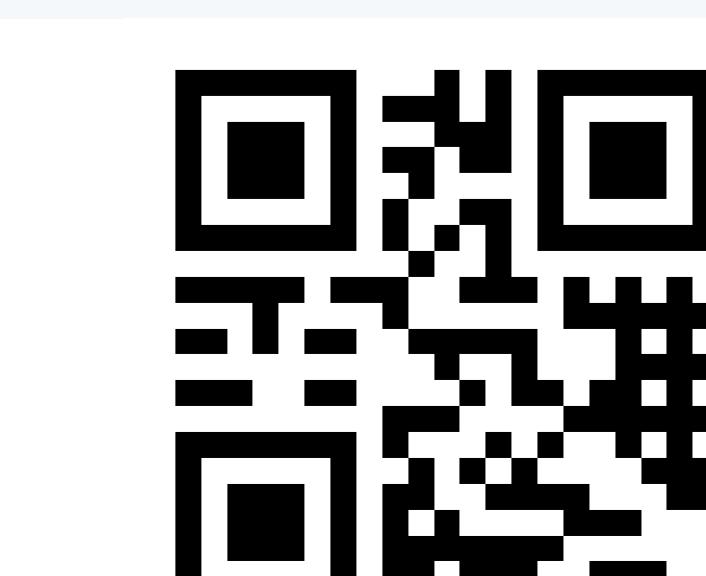
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K Public Conferences

The aim of this WP is to communicate the project and its goals to the general public and to facilitate exchange with experts.

There will be three major conferences with the target size of 120-160 persons:

- the inaugural conference at the National University of Civil Engineering (NUCE);
- the status conference at the Vietnamese Institute of Building Materials, that serves to present the empirical results, policy approaches and other project activities;
- the final conference at CCSB-VN will present the project results and show strategies for achieving lasting effects beyond the funding period.

Milestones and deliverables: three conferences; press releases, PR video clips, Conference Proceedings

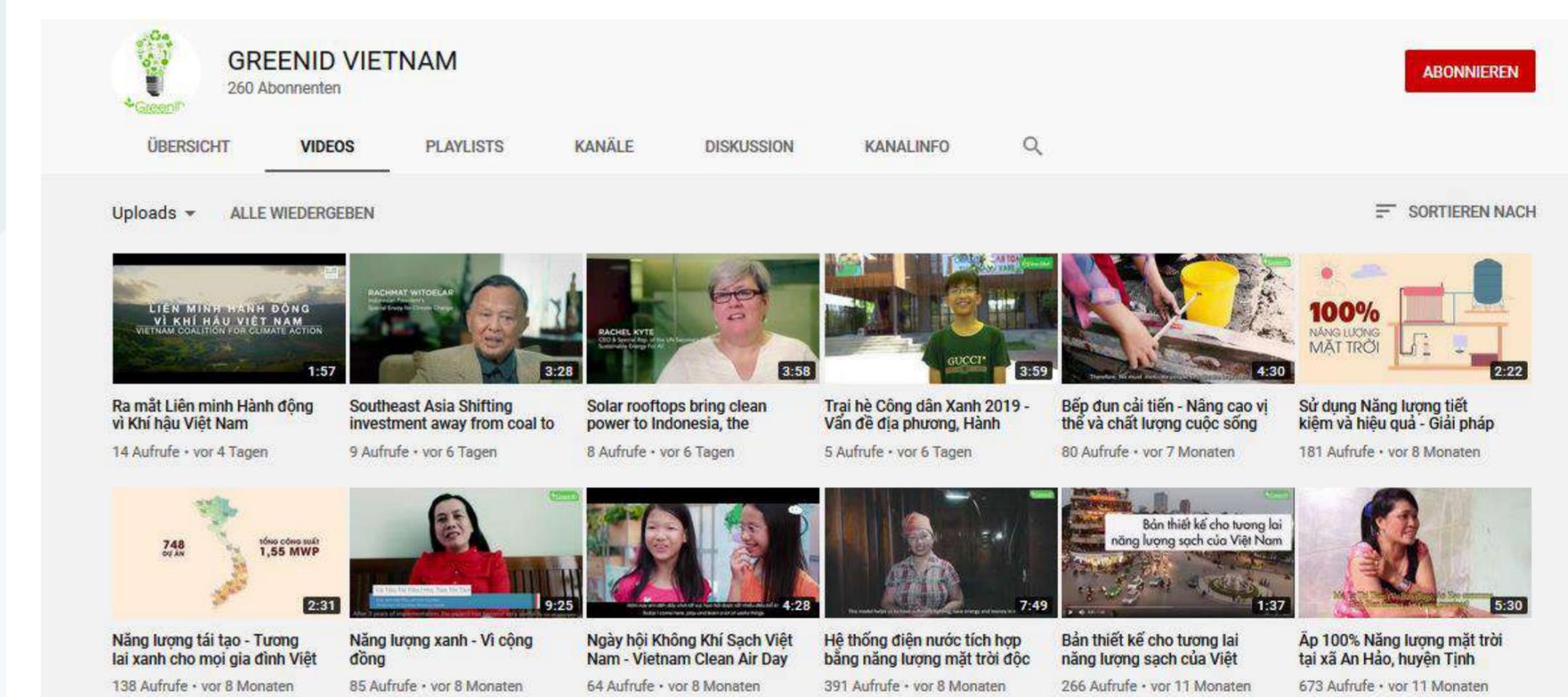


Figure 3: Youtube channel by GreenID

W Scientific Advisory Board

The aim of WP W is to ensure the scientific quality and relevance for local application.

A Scientific Advisory Board accompanies CAMaRSEC's research:

- It consists of six representatives from administration, industry and science, both from Vietnam and Germany.
- it is regularly informed about the project activities and the developed products, as well as on current issues,
- It advises in particular the implementation and utilization of the project's outcome and is invited to a short feedback report

Milestones and deliverables: Meet of the SAB; three feedback reports of the SAB

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