



MANUAL FOR THE

EC-LINK PLATFORM

Linking Eco-cities and their local players



ABOUT THE EC-LINK PLATFORM

While climate protection and climate adaptation targets had long been behind China's economic goals, a rethink took place in the 2010s, primarily due to the smog periods that posed a threat to health and economy. It was recognized that the reasons for the continuing air pollution and those for climate change are strongly correlated and massive measures were introduced to mitigate climate-change processes. China's Eco-cities programme plays a major role in this process, which is designed to help transform cities in ways that promote human well-being while also helping to protect the environment and climate.

In this context, there is intensive cooperation between stakeholders from EU and Chinese cities to benefit from each other through knowledge sharing. Part of this effort is the EC-Link platform, which is the only interdisciplinary platform that promotes easy exchange between China and Europe in the field of sustainable urban development. The EC-Link platform manages to bring together local players from the fields of economics, science, municipalities and NGOs through various functionalities and helps to overcome previously prevailing barriers, such as lack of experience, lack of contacts and language barriers. By including seven key sectors in the field of sustainable urban development, which bring together the most important issues in this area, interested parties can introduce themselves, their work and their concerns in a targeted manner and make contact with the other side by means of a translation function.

The platform is thus part of a fourth industrial revolution in which value is no longer created with traditional business models with products and services, but rather through digital technologies and networks. It offers added value by combining the components "information", "social content" and "connectivity".

Become part of the EC-Link platform and take advantage of the many opportunities to get in touch with other experts and promote sustainable urban development.

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1. Key structure of the EC-Link platform

The EC-Link platform aims to pick up users at a point of interest in cooperation with China or Europe, but where a lack of experience, lack of contacts and language barriers exist. The barrier for concrete actions in the field of sustainable urban development is therefore removed by an exchange of knowledge and experiences. In addition, the establishment of a network makes it easier to access support in specific situations. The knowledge available via the platform provides new impulses for the development of promising innovative approaches and drives forward concrete actions.



Figure 1: The key structure defined by the seven EC-Link sectors.

1.1 The seven EC-Link key sectors

A thematic structure – the seven EC-Link key sectors – helps people to find each other in a targeted manner. Within the framework of the EC-Link project, seven key topics were identified in advance, which are considered to be particularly significant for the field of "sustainable urban development". These are:

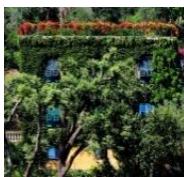
1. Compact Urban Development,
2. Green Buildings,
3. Green Transport,
4. Water Management,
5. Solid Waste Management,
6. Clean Energy,
7. Municipal Finance.

Through this structure users have the opportunity to exchange information on specific topics or to find specific information.



Compact Urban Development

The topic of "compact urban development" is of particular importance in China due to the Chinese urbanization strategy. This means that a low population density in cities leads to higher infrastructure costs and continues to result in high energy consumption and thus carbon emissions. The goal for Eco-cities is therefore a high residential density, a high density of workplaces and a neighbourly mixed use. This will provide city residents with neighbourhoods that combine work, housing, shopping, transport and even green spaces.



Green Buildings

To date, the construction and use of buildings is responsible for 18% of global carbon emissions, or the equivalent of 9 billion tonnes of CO₂ annually. The "green" construction sector aims to reduce the environmental impact associated with the construction and subsequent use of buildings. It is estimated that green buildings currently save on average 30% electricity, 30-35% water and 50-90% of waste disposal costs. The EC-Link project aims to maintain cooperation between Chinese and European cities with the intention of introducing sustainable solutions in the Chinese green building sector.



Green Transport

The transport sector has a significant impact on the environment. It is responsible for 20 to 25% of global energy consumption and carbon dioxide emissions. Greenhouse gas emissions from transport are growing faster than any other energy-consuming sector. Road transport also contributes significantly to local air pollution and smog. In Germany, energy consumption by the transport sector will account for a quarter of total primary energy consumption in 2017. China has experienced high growth in vehicles over the last two decades, a trend that is set to continue. Such a rapid increase in the number of vehicles in relation to population density puts Chinese municipalities under great pressure. EC-Link is committed to sustainable transportation systems that make a positive contribution to environmental, social and economic sustainability in each community.



Water Management

Chinese cities are facing challenges arising from population growth, climate change and the deterioration of urban infrastructure systems. As the demand for water is constantly increasing, cities have to prepare for efficient

management of the increasingly scarce resource water. EC-Link builds on the EU's experience and aims to help Chinese cities tackle water problems and improve water management.



Solid Waste Management

Integrated waste management is about preventing, recycling and managing solid waste in the most effective way to protect human health and the environment. Currently, China is the world's largest producer of municipal solid waste and it is expected that the production of this waste will continue to increase. To address the growing crisis in waste management, China will need to develop hundreds more landfills and incinerators in the coming years. European municipalities (or waste companies), together with EC-Link, can make a significant difference in guiding Chinese municipalities and local businesses to separate their waste and recyclable materials, also to minimise their costs.



Clean Energy

The global energy crisis and climate change require innovation in the energy sector and responsible consumption in both developed and developing countries. While cities around the world are committed to using 100 percent clean energy, Chinese cities must also follow this trend by focusing on introducing heat recovery for power generation and developing more renewable energy projects. EC-Link aims to help Chinese cities solve energy problems and improve energy management in urban areas.



Municipal Finance

Green Finance stands for the responsibility of the financial sector to support the reduction of greenhouse gas emissions and the creation of a climate-resistant economy. Green Municipal Finance (GMF) is a cross-cutting theme through a range of green finance topics, such as green banking and financial instruments. EC-Link aims to help Chinese municipalities to finance sustainable projects. To this end, an Urban Green Financing Network has been set up, involving over 40 stakeholders (project development and financing) to raise awareness of environmentally friendly financing solutions.

2. Functionality of the EC-Link platform

The main target of the EC-Link platform is to build up a network community to promote cooperation between different users and to create an exchange of experiences, information and ideas. This can lead to an increased number of activities within working groups or even among individuals in the areas of sustainable urban development also in terms of climate protection or adaptation to climate change. To achieve this goal, the EC-Link platform offers a number of different functionalities, which are described below.

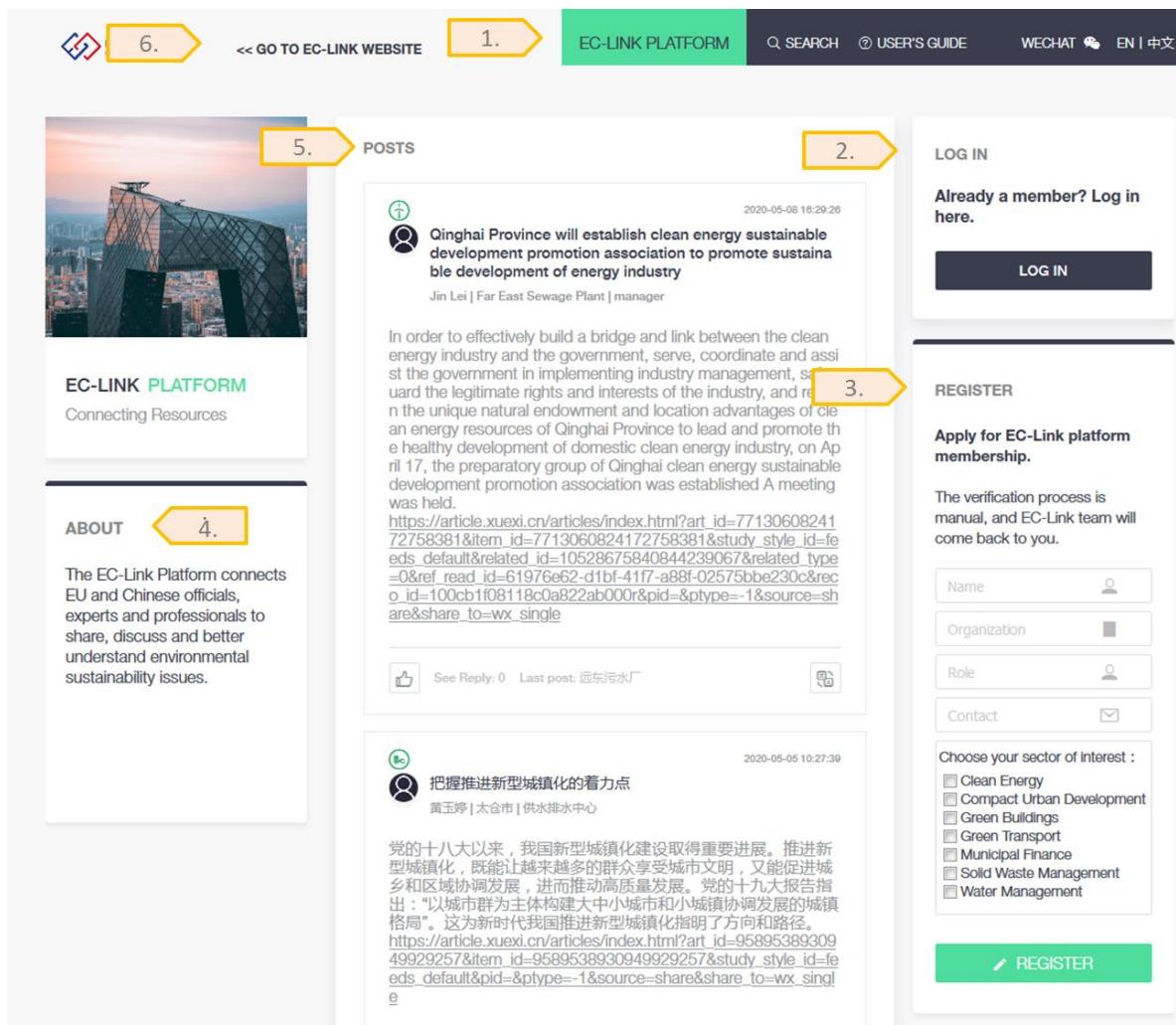


Figure 2: The figure shows the different functions of the EC-Link platform.

Figure 2 shows the start page of the EC-Link platform (May 2020), above which the main functions of the platform can be seen. These are divided as follows (please compare the numbers with those in figure 2):

1. Menu bar

- a. Home button
- b. Search function
- c. EC-Link Manual
- d. Link to WeChat
- e. Choice of language (EN/CHN)

2. Log In

- a. Clearly visible in the upper right area

3. Registration form

- a. Entry of personal data
- b. Entry of own fields of interest (relevant for profile and search function)

4. Brief description of the platform

5. Posts

- a. Title (200 characters) and text (700 characters)
- b. Photos and documents
- c. Topic of the post (selection of sectors)

6. Link to the EC-Link website

2.1 Menu bar

The menu bar is the navigation element of the EC-Link platform and consists of five areas, in logged in state of six:

1. **Home button:** The home button is visible on every subpage and leads back to the start page.
2. **Search function:** With the search function you can find people relevant to the topic.
3. **EC-Link manual:** The manual provides information on how to use the platform.
4. **WeChat link:** WeChat can be used to exchange information directly between the people involved (similar to WhatsApp and widespread in China).
5. **Language selection:** The language selection allows the platform to be displayed in English or Chinese.
6. **Log out:** The log out button is only visible, if the user is logged in.

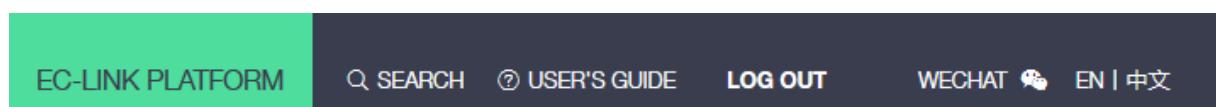


Figure 3: Menu bar of the EC-Link platform. If the user is logged in, a logout button also appears as field no. 6.

The screenshot shows the EC-LINK Platform search interface. At the top, there is a navigation bar with the EC-LINK logo, a link to the EC-LINK website, and search functions for 'SEARCH' and 'USER'S GUIDE'. It also includes links for 'WECHAT' and language options 'EN | 中文'. Below the navigation bar is a search form titled 'Search User'. The search input field contains the name 'Nina Stiehr', and there is a green 'SEARCH' button next to it. Below the search input is a dropdown menu labeled 'Choose your sector of interest'. On the left side of the main content area, there is a card for 'Nina Stiehr' with her profile picture, name, title 'Project manager', and organization 'Climate Alliance'. There are also three small icons below her name.

Figure 4: With the search function users can be found in two ways. This option shows a search by name.

The screenshot shows the EC-LINK Platform search interface. The layout is similar to Figure 4, with the EC-LINK logo, navigation links, and search functions at the top. The search input field now contains the text 'Municipal Finance x'. Below the search input is a dropdown menu. The main content area displays a grid of user profiles. The first row contains four profiles: Wang Shudong (Transportation Office Shanghai), Zhang Weijin (Architecture Shanghai), Li mi (Transportation Planning Division Hangzhou), and Zhao Qi (Green building Beijing). Each profile includes a small icon, the user's name, their title, and their place of work. The second row contains three profiles: Zhang Wen (architect Changsha), Sun Fengzheng (Plan Beijing), and Wu Shichu (Architecture Shanghai). Each profile follows the same structure with an icon, name, title, and location.

Figure 5: The second option provided by the search function is to search people by topic.

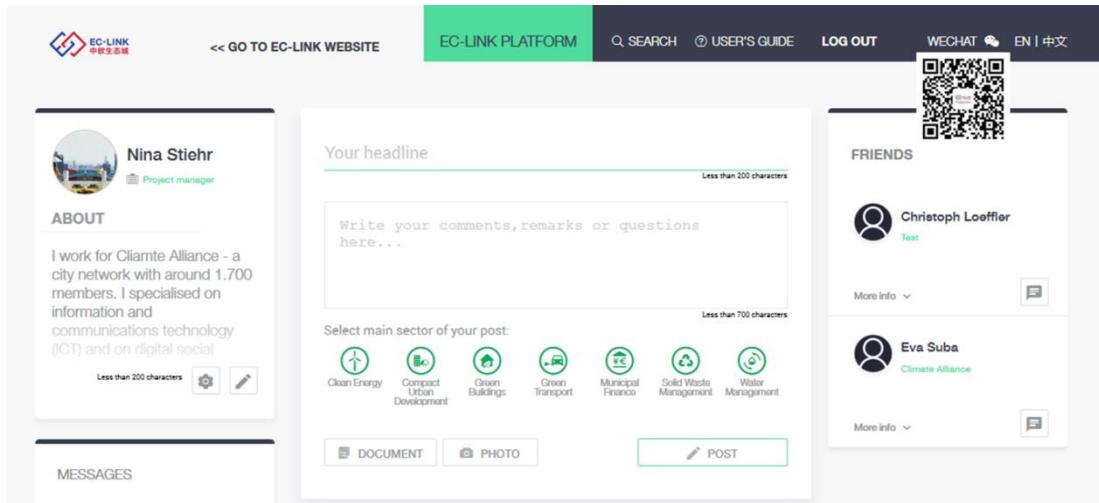


Figure 6: If you move the cursor to the WeChat button, a QR code appears. This code can be read by a smartphone, making it easier to communicate with users of the platform via WeChat.

This figure compares the EC-LINK Platform interface in English and Chinese. Both screenshots show the same basic layout: a header with the EC-LINK logo, a 'GO TO EC-LINK WEBSITE' link, a search bar, a user guide, a log out button, and a WeChat QR code. The English version on the left has sections for 'MESSAGES' and 'POSTS'. The Chinese version on the right has sections for '帖子' (Posts) and 'LOG IN' (登录). Both versions show a post by 'Qinghai Province' about establishing a clean energy sustainable development promotion association. The Chinese version includes a 'REGISTER' (注册) section for applying for the platform.

Figures 7a and b: These figures present a comparison of the platform in English and in Chinese. The language can also be selected via a button in the menu bar.

2.2 Registration

Before the EC-Link platform can be used to its full extent, registration is required. This ensures that the persons in question are real people who have a reputable interest in the platform. Name and e-mail address must be entered during registration. Also, the own interests or expertise are indicated by the selection of the EC-Link sectors, through which the person can be identified as an expert within the search function later on.

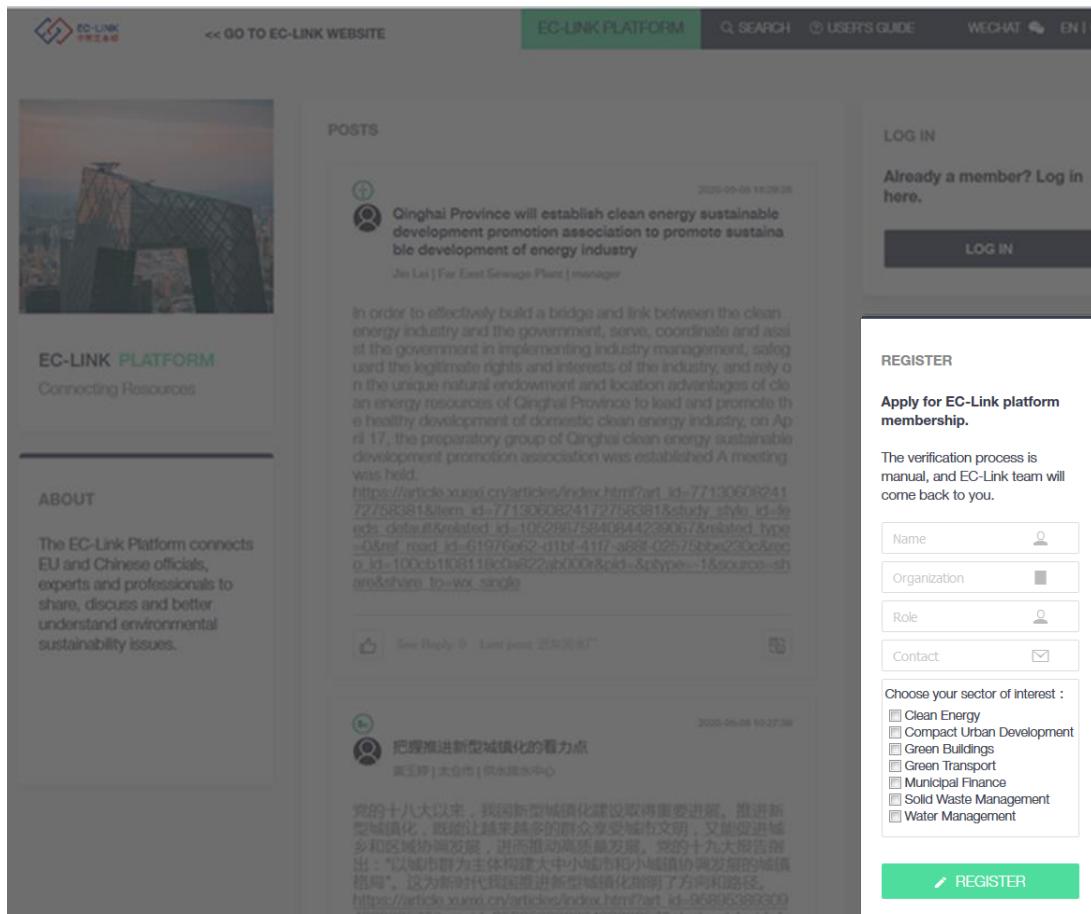


Figure 8: The possibility to register is clearly visible on the right side.

2.3 Login

With a login the start page changes fundamentally. As already mentioned, the **logout button** appears in the menu bar (a). Furthermore, instead of the login button and the registration form, a window with an overview of the **EC-Link contacts** appears in the upper right half (b). On the left side, the EC-Link icon image becomes the **profile window** (c) and the EC-Link short description turns into the **message overview** (d). Especially striking is the field centrally on the page above the posts, where the user can **create his own post** (e) (please see figure 9).

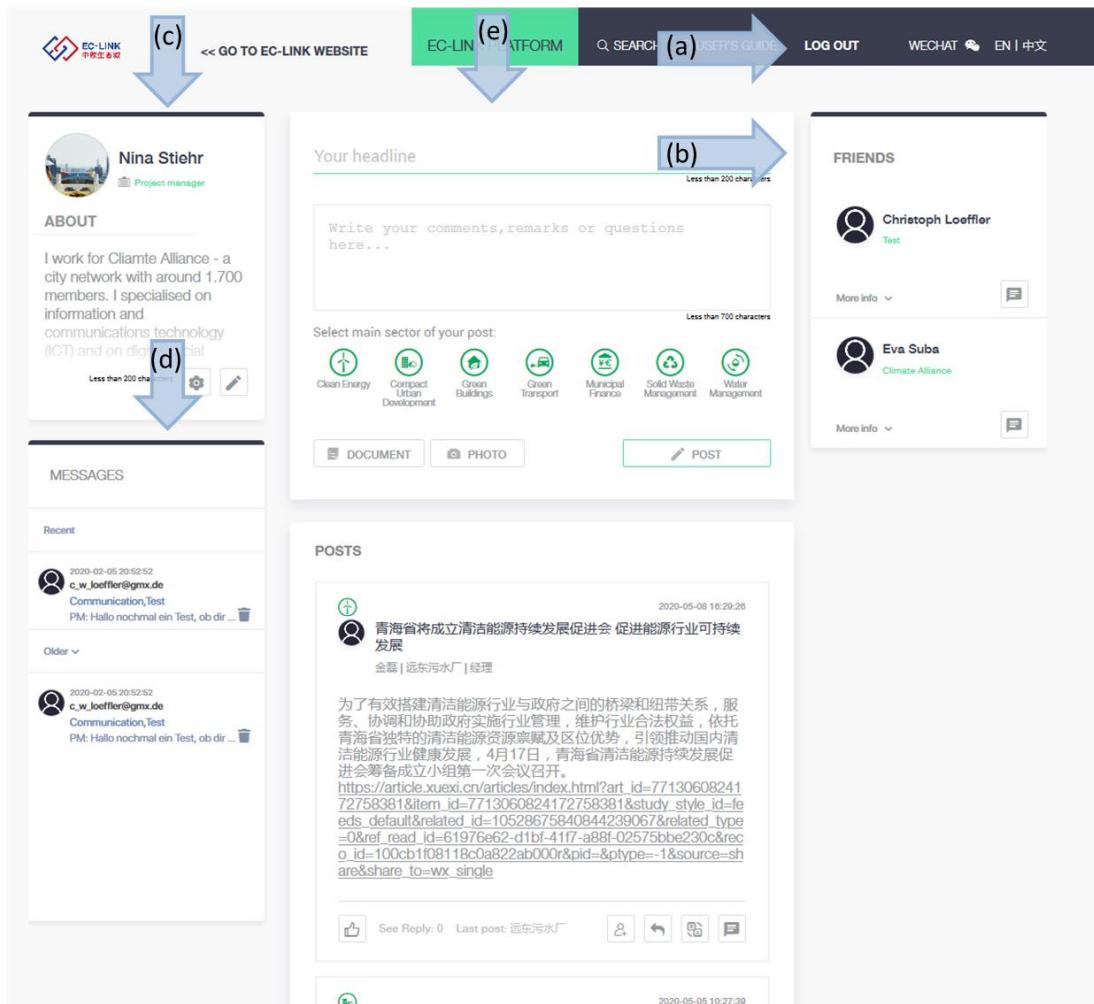


Figure 9: Overview of how certain areas of the EC-Link platform home page change after a login.

2.4 Posts

The posts on the platform are the central information element in the sense of a knowledge database and appear directly on the homepage. If you are logged in, through the **post form** you have the immediate opportunity to leave your own relevant information in the topic area of the seven sectors (please see figure 10):

- In the form of a headline of over 200 characters,
- In the form of text over 700 characters,
- As an uploaded document,
- As an uploaded image.

By selecting a sector or several sectors, the post can be found later by interested parties and is thus in central connection with the **post selection function**.

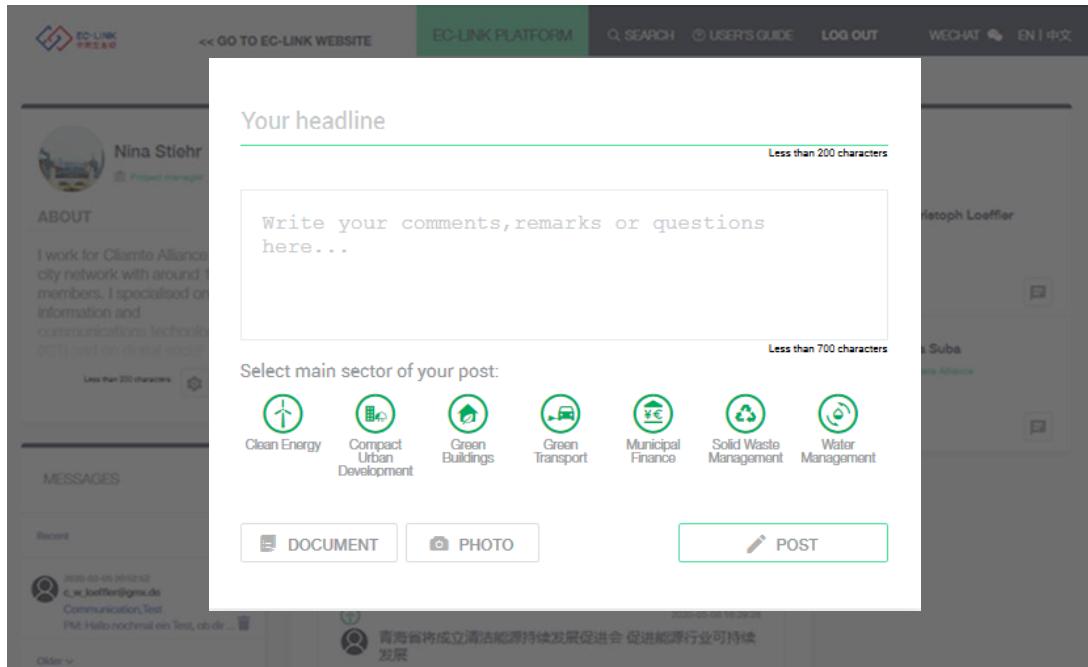


Figure 10: The post form offers the possibility to pass on one's own information about e.g. best practices to the interested public.

However, only the latest five posts are displayed on the start page to keep the page clearly arranged. In order to make it possible to select specific posts, a post subpage exists that can be accessed via a button at the end of the start page. On this subpage it is possible to select single or multiple sectors at the same time, so that only those posts are displayed that actually fall into the respective area of interest. This works, as already explained, by assigning the EC-Link sectors to one's own post, since this creates a link to the post selection function. The **sectors that apply to the content of the post are displayed** to users in the upper left-hand area of the post.

Another important feature is the **possibility to translate the post** from Chinese to English or vice versa. If a post is of special interest to the user, the user can in a logged in state **like it, contact the author, share the post and leave comments**.

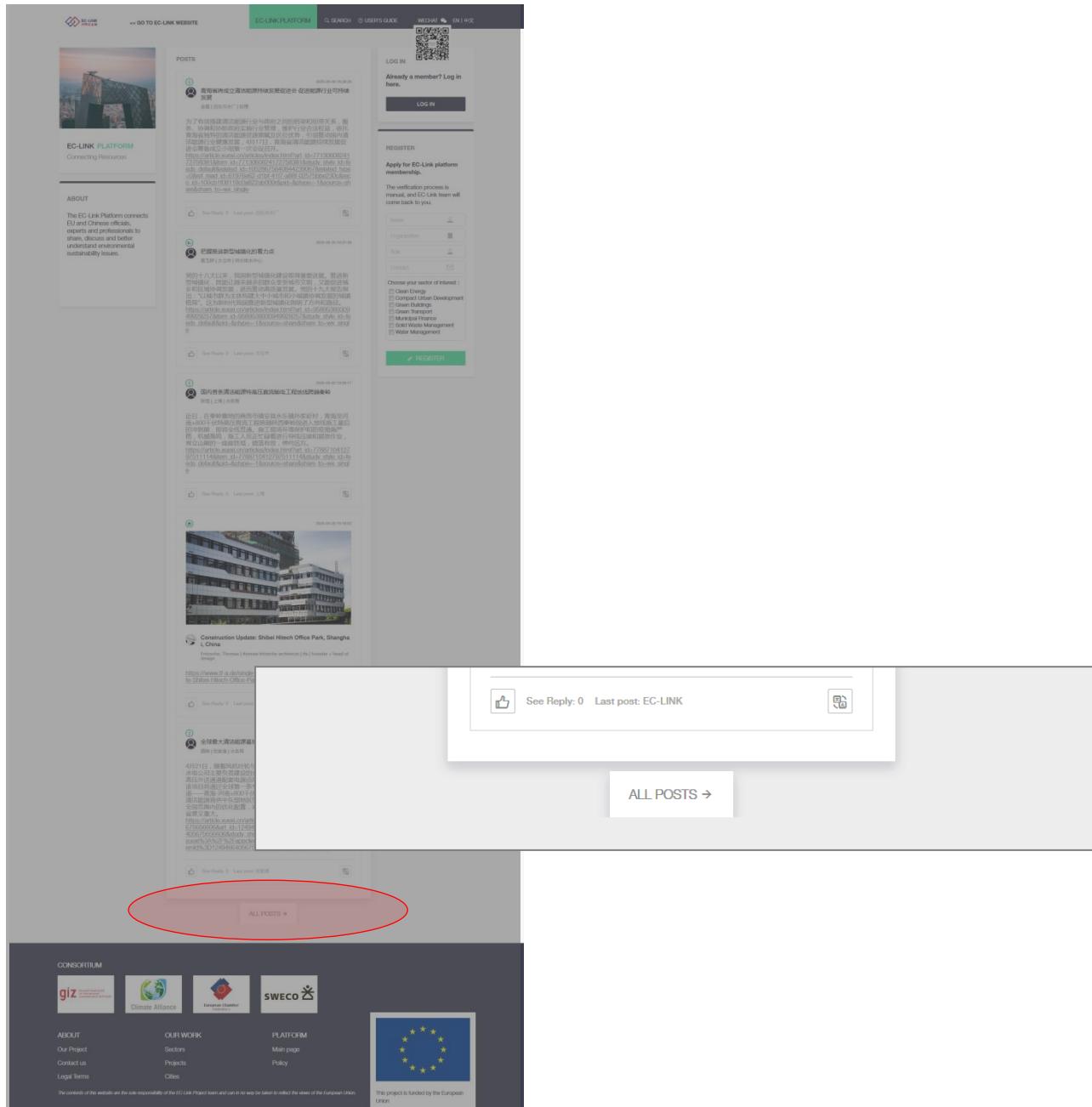


Figure 11: The start page shows only the latest five posts for a better overview. The post button at the end of the posts leads to the post subpage.

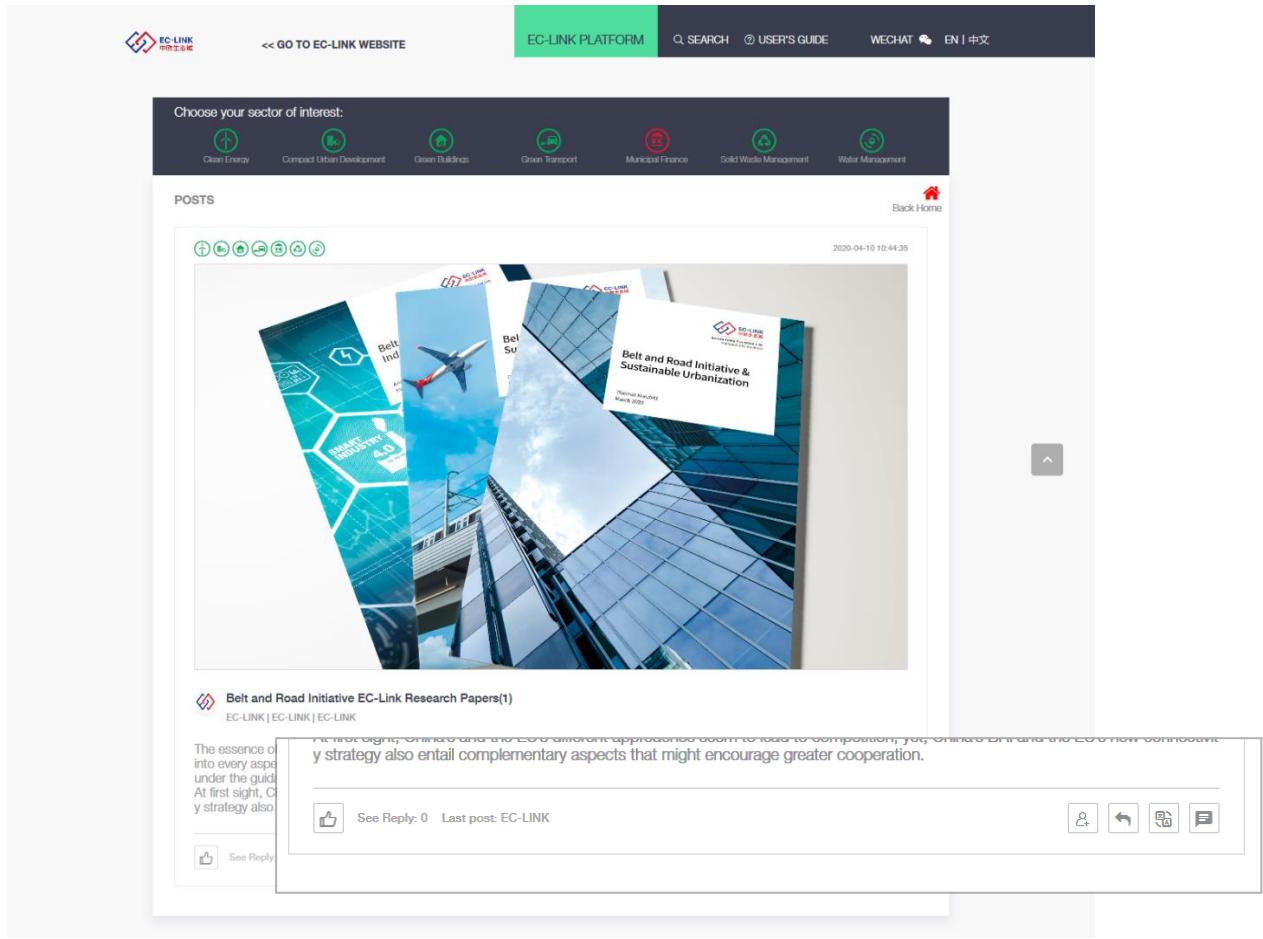


Figure 12: In this example, Municipal Finance was selected with the post-selection function, in which the seven EC-Link sectors are displayed as buttons using symbols. The displayed post reflects this topic, but also other topics, as can be seen via the EC-Link symbols in the upper left area of the post itself. Below the post text there are buttons to link, share and comment to the post, but also to contact the author. There is also a translation function from Chinese to English and vice versa.

2.5 Networking

On a higher level, networking is what the EC-Link platform aims at. This is done by contacting registered users. To do this, a request must first be sent to a person, which must then be confirmed by the person in question. Once this has been done, this person is listed in a logged in state on the right-hand side of the start page, as already described. On the left side, also as already described, the latest messages appear. Another network element is the link to WeChat and the functions of sharing, liking or commenting on a post. In this way, interactions can be initiated, both with users of the platform, but also with people outside the EC-Link community who may have an interest in joining the platform.

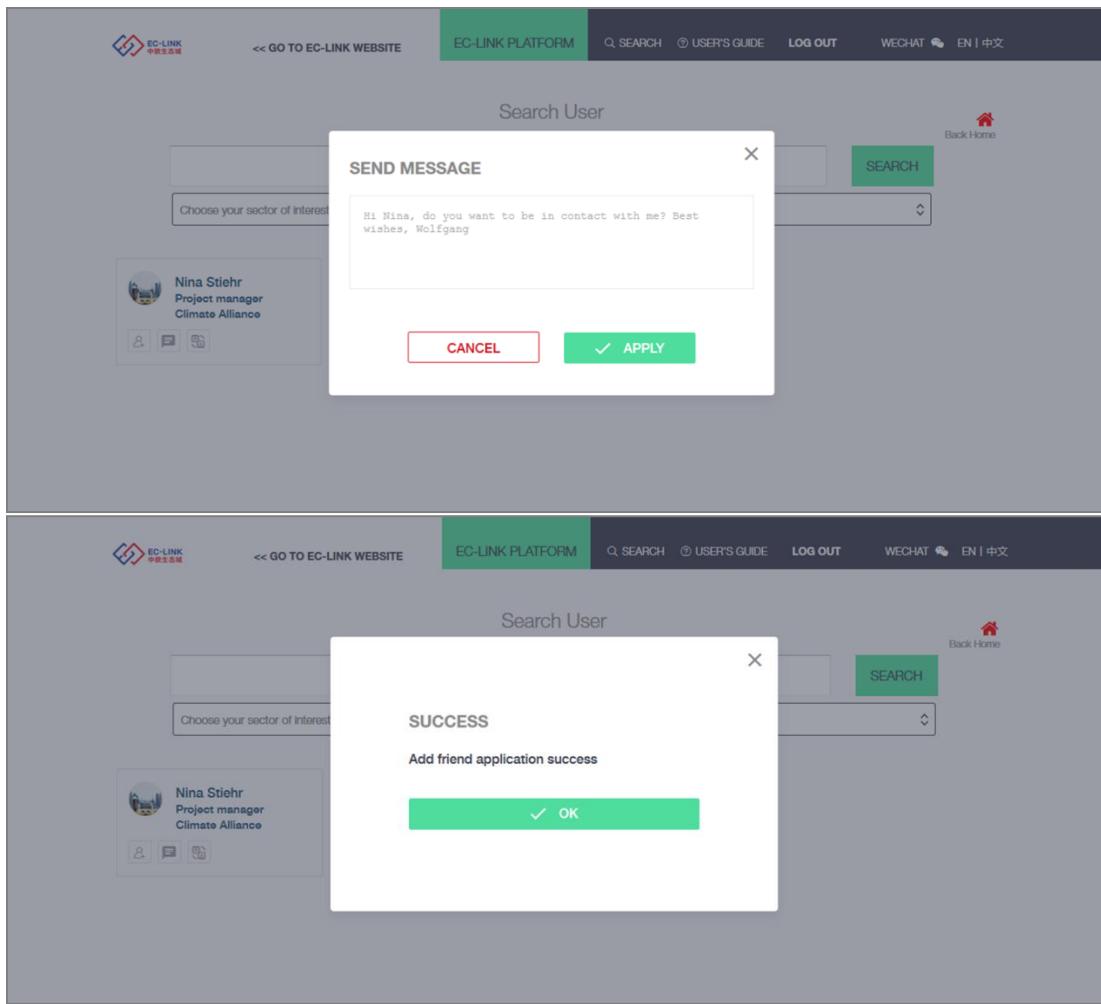


Figure 13: Overview of how a contact request is made. Once the request has been sent successfully, a confirmation field appears.

The screenshot shows the EC-LINK Platform's main interface. On the left, the user profile of Nina Stiehr is displayed, including her photo, name, title (Project manager), and a brief bio about her work for Climate Alliance. Below this is a 'MESSAGES' section showing recent messages from other users. In the center, there is a 'Your headline' input field and a 'Write your comments, remarks or questions here...' text area. Below these are sector selection icons for Clean Energy, Compact Urban Development, Green Buildings, Green Transport, Municipal Finance, Solid Waste Management, and Water Management. There are also buttons for 'DOCUMENT', 'PHOTO', and 'POST'. On the right, there is a 'FRIENDS' section listing Christoph Loeffler and Eva Suba, each with their profile picture, name, title, and a 'More info' button.

Figure 14: In order to keep a better overview of one's own networking activities, "friends" appear on the right side of the start page in an overview. In addition, the message field on the left shows which messages were sent last.

This screenshot shows an open message conversation between Nina Stiehr and another user. The message history includes two messages from n.stiehr@climatealliance.org: one from 2020-02-04 at 21:41:36 saying 'Hallo Eva, kommt meine Nachricht bei dir an?' and another from 2020-01-16 at 17:42:15 saying 'Hallo Eva'. Below the messages is a text input field containing 'Hallo Eva, I have news for you. Please contact me.' and buttons for 'DOCUMENT', 'PHOTO', 'CANCEL', and 'OK'. To the right, the 'FRIENDS' section is visible, showing the profiles of Christoph Loeffler and Eva Suba.

Figure 15: If there is a conversation with a user going on already, this exchange is displayed in the message field. In this way, the last content exchanged can be traced even after a longer absence and a reply can be sent. Also here it is possible to translate from any language into Chinese. A document or a picture can also be attached to the message.