

NCPP - Northern Clay Plaster Project,

Professional Qualification for Working with Natural and Sustainable Building Materials

**COUNTRY ANALYSIS FINLAND
WORK PACKAGE NO. 2**

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REPORT ON ANALYSIS OF THE CURRENT SITUATION IN FINLAND**General awareness**

General awareness of the building and the public sector for the significance of sustainable and ecologic building materials.

Awareness of building professionals and public for the significance of ecological materials in overall is still very low. Construction companies have their conventional mainstream methods, which they use, and are not open to different thinking in terms of natural materials or sustainable building. The situation is similar when it comes to producers. The building sector is, however, aware of future trends and should there arise enough demand, would in eco-efficient building projects be willing to use sustainable and natural building materials.

Broad public is getting more and more hints about ecological materials from main media, who is interested in publishing and showing ecological topics, even in our country, like f. ex. straw bale building. There also are ecologically minded people who are already interested in the topic and look for more information through the web, but most of them are not building professionals.

Current situation in Finland and need for education in the field of natural materials gives our project a bigger importance. There is more and more demand for ecological way of building from people who are planning to build their private houses and there are very few professionals who are competent in the use of ecological materials.

Press – effects mostly broad public

There have been some tv-programs and some articles about ecological construction, the main tv-channel YLE1 showed 2010 and repeated 2012 Pasi Toiviainen's documentary "Vihreä kaupunki", green City, showing a lot of earth building, incl. interviews of professor Minke showing his houses.

In Fox tv there is a new serie "Arin ja Kirsin Kotirempät" (Home repairs by Ari and Kirsi). Both the performers are excellent building professionals and they present in their show as industrial building products as well as ecological building masters (Mikko Kylämarkula for cordwood masonry, reet roofer Tarmo Ahonen in Lappeenranta and Paul Lynch for strawbale building) and give ecobuilding tips.

Publicity is usually based on showing new houses, so it is often architects showing natural materials. F. ex. architect Kasper Järnefelt has made excellent pr for straw bale building and the Natural Building Company.

There have been articles about ecological building as well in the main media as in publications of the different associations working in the field of ecological construction.

Qualification possibilities

At the moment there are almost no qualification possibilities in Finland for people working with ecological and sustainable building materials.

There are some informal possibilities, but the quality is not ensured and the courses are not consistent in their content.

However, there are possibilities to learn a little bit about clay at schools for conservation/reservation and in South-West Finland in construction:

- Ikaalinen College of Crafts and Design building conservation
<http://ikata.lpkky.fi/dynamic/1/59.html>
- Kymenlaakso University of Applied Sciences, in Kouvola, restoration
<http://www.kyamk.fi/Hakijalle/Nuorten%20haku/Kulttuuriala/Restaurointi/>
- Metropolia University of Applied Sciences, conservation.
<http://www.metropolia.fi/koulutusohjelmat/kulttuuri-ja-luova-ala/koulutusohjelma...>
- Oulu Vocational College, artisan (building restoration)
<http://www.osao.fi/index.php?1923>
- Seinäjoen University of Applied Sciences, building conservation
http://www.seamk.fi/Suomeksi/Koulutus/Koulutusalat/Kulttuuriala/Konservoinnin_ko.
- TAO, Turun ammattipistosäätiö, building restoration
<http://www.taos.fi>
- Turku University of Applied Sciences, building restoration + construction
<http://www.turkuamk.fi>

In Finland, however, the only possibility for building craft to widen their clay plastering skills is learning at work.

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- There are a few organisations and enterprises which offer earth building days or workshops, but only by short courses. Building crafts do not know these courses or does not think that it is an option for them. The courses are usually set for people, who are just interested and for future self builders and interested architects, because those are usually the participants. There is no curriculum or any scheme which would be for beginners or advanced. Courses have no scheme or continuation and are not given regularly.
- *The situation is very positive for our project – curriculum for education about clay usage. The Northern Clay Plaster education material can be used for shorter and longer vocational courses, or as part of courses for ecological, sustainable building or renovation building. And the education and tests will be done according to the ECVET Earth Building, so the crafts will also be able to continue their studies in other EU-countries.*

Current education and training in earth building

- During Finnish-Estonian **Interreg IIIA –project "Reed strategy in Finland and Estonia**, <http://www.ruoko.fi>, of **Southwest Finland Environment Centre** in 2005-2007 and **Interreg IV A projects of Turku University of Applied Sciences, ProNatMat**, <http://www.pronatmat.eu>, Promoting natural material know-how in Finland and Estonia in 2009-2012. There has during this ProNatMat-project been f.ex. a cob toilet -building workshop at Lumo-Keskus in Turku.
- **Interreg IIIA-project Cofreen**, <http://www.cofreen.eu>, Concepts for using reed biomass as local bioenergy and building material, in 2010-2013, there has been a.o. research, workshops and seminars about different natural building materials and techniques. Estonian University of Life Sciences has been a valuable partner in all these Interreg-projects.
- **Luomura ry**. – The Centre for Ecological Construction, <http://www.luomura.com/> The non-profit-association Luomura was founded 2001 to develop natural, ecological and healthy building. One of the first activities was an employment project for building professionals where Ekoateljee, art education premises of the Snellman College in Helsinki were built. In Luomura's yearly Terve Talo, Healthy Housing magazine, there are lots of articles about earth building. Luomura organizes also clay building days and Terve Talo –exhibitions with interesting seminars.
- **The Natural Building Company Oy**, <http://naturalbuilding.fi/events/?lang=en> - offers one evening lecture and one workshop/month on natural building themes. They're co-operating well with American and European earth building specialists, f.ex. with Bill and Athena Steen and Amazonails.
- **Savi ry**, Savirakentamisen edistämiseksi ry – Lerbyggeföreningen i Finland, the Finnish clay building association, <http://www.saviry.fi>, was founded in 1996. It gives information about earth building and has co-operated with Luomura at their clay building days. The association has contacts and networks with natural building communities in other countries.

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- **Suomalaiset Tulisijat – Finnish Fireplaces ry**, <http://www.tulisijat.tv>, Association of masonry industry and masons organizes usually once a year fireplace workshops introducing different low-emission fireplaces, f.ex.
- 2008 Kimola workshop with a.o. 1 low-emission fireplace and 1 baking oven out of unburnt bricks from two different brick manufacturers, clay mortar mixed on the site, clay plastered
- 2009 ecovillage Vihti workshop, altogether 9 fireplaces a.o. 2 Estonian tile ovens built with clay mortar, 2 low-emission ovens out of unburnt bricks, clay mortar mixed industrially for testing, clay ovens plastered with Kreidezeit plasters
- 2013 TTS Sammatti workshop, 3 fireplaces (2 low-emission) and 2 chimneys. One of the low-emission ovens was built with unburnt bricks, Tiileri clay mortar and clay plastered. Its fire bricks as well as those in the other ovens were mortared German Wolfshöher Universal fire clay mortar (tested, works well). The clay oven, chimney, warm bench and one of the meeting room walls will be plastered with Saviukumaja OÜs beige clay mortar.
- **Rakennusperinteen Ystävät ry**, Association of the Friends of Building Heritage, <http://www.tuuma.net>
- **building renovation centers in Finland**, <http://www.tuuma.net/linkit.php>, every now and then organize also building courses/workshops for clay plastering, cordwood masonry etc.

Current building with earth activities

At the moment there are very few activities, only some private houses built by self-builders interested in ecological building or living in ecovillages like f. ex. at Livonsaari community in South-West-Finland.

The builders are usually not craftsmen. And they use many different earth building techniques and materials like f. ex. straw bale + clay, reet/reet bales and clay, clay/straw bales.

Also Natural Building company has organized some Grundtvig-financed courses.

Therefore there have been also stories about unsuccessful ecobuilding projects like building a straw bale studio in Vihti.

Recognition of qualification

There is at the moment no organized education for clay plastering or ecological building in vocational education institutes.

Only the schools for conservation, renovation and cultural heritage in Finland have education briefly touching the clay topic as an old building method and suitable for nowadays reconstruction of old clay buildings.

Who are the stakeholders

Industrial sector:

- Tiileri, <http://www.tiileri.fi>, a group of 3 Finnish clay brick factories - unburned clay bricks from Ylivieska works suitable f.ex. for fireplaces. Also Tiileri clay powder as well as clay mortar "Aito Tiileri saviunilaasti" from Tarvasjoki works.
- Decos Oy, <http://www.decos.fi>, importer of Terrafino clay plaster, paint and Tadelakt from the Netherlands
- Kivira Oy, <https://www.kivira.fi>, importer of Baumit, Bayosan clay plasters VL 14V, VL 14 G, VL 14 F, VL 14 E and VL 14 C from Germany
- Saviukumaja OÜ, <http://www.saviukumaja.ee>, one of the NCP-partners, has started to sell clay plasters (no pigments, colours with different clay/sand), clay bricks and building blocks directly into Finland. Its products as well as other producers f.ex. Kreidezeit plasters can also be bought from Majatohter-shop in Tallinn.
- at Lumo-Keskus in Turku there are in the Lumo-Shop, open Su between 11-15 o'clock f.ex. Majatohter products for sale, incl. f.ex. Majatohter Stucco Lustro.

Not regularly in production, but available, if one gets into contact early enough:

- unburnt bricks from restorer Aki Sulonen by Hämeenkyrö Tiilitehdas Oy, www.tiilitehdas.fi
- unburnt clay floor plates by Riittiön tila, Riittiö farm in Vehmaa

Crafts for clay plastering f.ex:

- Teemu Kuivalainen, Joensuu, <http://www.mestarinpuolikas.fi>
- Teemu Kajaste, Porvoo, Rakennusentisöintiliike Ukri, <http://www.ukri.fi>
- Mikko Kylämarkula, Humppila, <http://www.urpolankartano.fi/>
- Ibon Sanchez, Röykkä, Tulisijat ja Laattatyöt Sanchez
- Jan Hedengren, Inkoo
- Natural Building Company, <http://naturalbuilding.fi/>
- Estonian crafts

Medium and long term trends

The medium term trend in Finland is demand either from people who are aware of the importance of good indoor climate and healthy environment. Or/and from self-builders who are interested in natural materials and who, at the same time, look for cheaper solutions.

Professionals have to be pushed and shown and convinced, some will understand that there is a niche in the market and will seek job opportunity in working with natural materials.

In Finland we do not have very many old clay houses, although there are massive clay manors, and animal sheds as well as old clay plastered timber houses and cordwood buildings. There is also a keen interest to renovate old houses, which will need clay plastering skills.

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Our building and construction regulations changed on 1.7.2012 and require now energy-efficient passive house building.

Medium term trends are for use of natural materials by self builders and few enlightened professionals, who realise the advantages of natural, sustainable building materials.

Long term trends will be, using clay by building industry in new passive houses to provide better climate, for health reasons and to use clay more often in renovations.

Most probably all the building and usage of buildings will be less energy and nature consuming and one does no more have to talk about ecological building as a separate building sector. In general in building industry the long term main stream trend will be in producing industrial building materials with changed production in a way of using less energy.

Constructing houses can seem to have a very slow effect on the future. Yearly the amount of new building is only about 1 % of the whole building base. The change is very slow. In the long term this, however, has a bigger meaning. In the year 2050 a remarkable quantity of Finnish people will live in houses built after 2010.

Legislation

Clay plaster is not mentioned in the Finnish building regulations or legislation.

Meetings and mapping potential interest and needs:

- Final meeting of Luomura ry's Models of building and living-project in Tampere **on 15.11.2012**
- Savi ry. autumn meeting in Pori on 17.11.2012
- NCPP project meeting at TTS Sammatti 30.1.-1.2.2013, project negotiations, clay plaster testing, presentation of earth building and clay plastering to the educators of TTS Services, Construction and Housing
- Fireplace workshop of TTS/Finnish Fireplaces at TTS Sammatti in April 2013. Unburnt clay bricks mortared with clay mortar and clay plaster.
- Savi ry's meeting at Lumo-keskus in Turku 27.4. and visit to Livonsaari Ecovillage 28.4.
- Luomura ry's, <http://www.luomura.com> Earth building day, together with Savi ry. at Vesilahti ecovillage, <http://www.kiuruntila.fi> 8.6.3013

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