

Dear BioNova Partners & Customers,

Christmas is just around the corner and we hope everyone can lean back and relax a little bit, because 2011 was a very interesting and also exciting year.

The BioNova Newsletter celebrates its one-year anniversary. Since December 2010, the BioNova Global office has been successfully publishing this monthly Newsletter. The feedback we get from our clients, partners, and the press is thoroughly positive, so we have decided to continue publishing next year.

For our current Project of the Month, we present a multiple award-winning BioNova Natural Pool. It's located on Mauritius and will surely raise your desire for summer and sun with its exotic diversity of water and marshland plants!

In addition, we also want to introduce a BioNova Partner to you in detail again. This month we'll feature the company Bitters from Germany.

As winter is also the perfect time to plan and prepare upcoming garden activities, we'll show you some typical questions that a potential builder of an NSP or biological Natural Pool should think about.

Under our BioNova Historical section, you can learn about a BioNova public NSP that has been in use since the year 2000.

We hope you enjoy reading! We also want to wish a Merry Christmas 2011 and a Happy New Year 2012 to all our customers, partners, suppliers, and friends!!

Your BioNova Global Head Office,

Rainer Grafinger, Christine Schoeck, Andrea Enseleit, Stephanie & Jusuf Rifatov



Project of the Month



Our current Project of the Month is located in Grand Baie, on the beautiful isle of Mauritius, in the southwest Indian Ocean.

The construction of this very interesting project started in 2009.

The location is a residential apartment complex of 20 luxury villas which are all designed in the sense of "green thinking." The complex is equipped with solar collectors to produce ecological electricity, and also has its own biological water treatment.



The Ecosis company (BioNova partner on Mauritius Tony Lee Luen Len) designed BioNova Natural Pools at 2 meters x 3 meters for private gardens in the complex. In addition, Ecosis also completed a 15 meter x 4 meter Natural Pool for common use. The regeneration area was designed as a decorative part of the entrance to the complex. Even after a short time, the tropical water plants could fully unfold their beautiful foliage and blooms. The designers of Ecosis had chosen a modest but yet very noble design.

Technical development was supported by the BioNova Global Head Office. As part of BioNova Partners support, Rainer Grafinger also supervised aspects of the building process.



In 2008, the concept of this project was recognized with the Innovators Award of the National Productivity and Competitiveness Council (NPCC). In 2010, Ecosis was honoured at the „1st Green Awards Mauritius (GAM) 2010“ with first prize in the category „Green Building, Development & Land Use.“

This project shows once again that ecological design is no longer in contrast with luxury and noble living ambiance today.



The BioNova Family



This month we introduce to you the BioNova partner Bitters from Germany. Dipl.-Ing. Andrea Bitters and her husband Konrad (a gardening and landscaping engineer) have operated a garden centre in Hamminkeln-Dingden (North Rhine - Westphalia, Germany) since 1995. There, they offer flowering plants, ornamental plants, and different kinds of garden ceramics. They also run a thriving tree nursery, where their customers can buy various kinds of trees from palms to bonsais. The „Gartencenter Bitters“ also offers new or rebuilding of gardens, from planning to maintenance.

Bitters also regularly organizes interesting events, for example special Advent exhibitions and a December Christmas tree sale. To find further information about coming events, please consult their website www.gartenpartner-bitters.de.

In the year 2006, Andrea and Konrad decided to enlarge their product line. As they were convinced by the BioNova System, they became members of the BioNova family and started offering BioNova NSPs and Natural Pools. The investment was worthwhile, as this year they received orders for 3 BioNova NSPs.

Their NSPs are characterized by their exclusive design. The planners therefore focus on the range of items in their own garden centre, and they often enhance their NSP projects with noble bonsais from their own strain. The BioNova experts also rely on the plain elegance of natural materials. For that reason, their design is mostly dominated by the use of different kinds of natural stones and high quality woods.

These featured pictures show an NSP which was finished this year by our BioNova partner Bitters from Hamminkeln-Dingden. Because of its gentle lightning, the BioNova NSP is a real eyecatcher, even at night. Besides the beautiful optical effects, this lighting also ensures safe and comfortable use of the NSP in the darkness.



There are no more dates for 2011! But in 2012 we start as lively as ever!

January 2012

Starting January 20, 2012, Miami (USA), BioNova Natural Pools US

A very special BioNova event will take place from January 20th, 2012, in Miami Florida, USA. Our US Head Partner James Robyn (BioNova Natural Pools) will offer a training event for all designers, gardening companies, and pool builders interested in NSPs and biological Natural Pools. For further information, please visit: <http://www.bionovanaturalpools.com/upcoming-onedayseminars.html>

BioNova training events 2012

In the year 2012, the BioNova Global Head Office will again offer several different training events for all partners. Following are the dates.

BioNova Training for English Speaking Partners

February, 23 & 24, 2012, Best Western Hotel, Parsdorf nearby Munich (Germany)

We offer this training in English for our foreign Partners. In the year 2011, many Partners came from the USA to Munich, to take broad knowledge home across the pond. For this year, Partners from Italy and Serbia have already signed up for the English speaking training. And also our new Indian partner will take part for the first time (see also the information below).

BioNova Training for Beginners, German Speaking Partners

February, 27 & 28, 2012, Best Western Hotel, Parsdorf nearby Munich (Germany)

At this training event, beginners, for example new BioNova Partner employees, are introduced to the knowledge of planning and building NSPs and biological Natural Pools. Also welcome are partners who want to refresh their knowledge.

BioNova Training for Advanced Partners, German Speaking Partners

March, 1, 2012, Best Western Hotel, Parsdorf nearby Munich (Germany)

This is a special additional training for our advanced BioNova partners.

New BioNova Partner From India

In November 2011, the BioNova group enlarged its world-wide partner network by a further cooperation with an Asian partner. From now on the company „Blue Iris Pools“ (based in Bangalore) will represent the BioNova group on the Indian subcontinent. As mentioned above, the company will also attend the training event for English speaking Partners in January 2012.

The BioNova family is very pleased to welcome the new Indian family member, and appreciates his confidence in the BioNova system!

Basic Questions and Answers for Planning an NSP



Many gardeners use wintertime to make plans for the new garden year, and to think about the things they want to achieve in the coming season. Maybe one or another dreams about a biological bathing possibility in the garden. But what are the basic questions we have to think about in this case?

First of all it's important to be clear about the following issues.

- How big is the NSP going to be?
- Where on my property should it be located?
- How will it be used?
- How many persons will use it?
- What design do I prefer?
- Which BioNova building method is the right one for me?

Size

The size of the swimming pond depends primarily on the property size, budget, intended use and number of users. Ideally the swimming area should be at least 8 meters long and 4 meters wide. With this width, two people can comfortably swim next to each other.

If you want to use your NSP for refreshing after a sauna or only as decorative water element in your garden, the BioNova Minipool is a good alternative for you. This building method can be utilized even in very small space. The smallest BioNova NSP, for example, has a only 4 square meter-sized swimming area and a regeneration area of only 10 square meters.

Make sure that there is adequate space for the regeneration zone in the plan. In an NSP of at least 80 square meters in total area, the swimming zone and regeneration zones should be approximately the same size. If the area is less than 80 square meters, the following rule applies: The smaller the pond, the greater the percentage of treatment area (exceptions: see chapter on pool construction methods and the chapter on errors in planning). When building a one-chamber NSP, the regeneration zone must be a minimum of 2 meters wide.

The largest private BioNova NSP that has been built has a total area of 7,400 square meters, and the biggest wake board lake built under the BioNova System is 120,000 square meters.

Location at the property

To find the optimal location for the swimming pond, the clients must be educated as to the advantages and disadvantages of each possible placement.

closer to the house	farther from the house
+ you can go easily from house to pool	+ less noise
+ easier management of family/guests based on closer distance	+ no visual temptation that will make children want to swim constantly
+ easier supervision of children	+ fewer design constrictions
+ beautiful views of NSP from house	+ fencing easier to accomplish
- possibly noisier due to playing children	- children at play can't be supervised as conveniently
- visual temptation for children to play means more supervision	- you may have to walk a long way to get to your NSP
- must match the architecture of the house	- may not be able to hear telephone or doorbell from pool
- separates the yard from the house (creates a barrier)	- substantial amount of landscaping budget will be spent farther away

Pool Usage

Knowing the wishes of the user groups is especially important in the planning of an NSP. For example, when you know that many children are going to be using the pool, there are a number of different play features you can incorporate into the design. Athletes who want to use the pool for training will require a different design than people who mainly want to relax in a natural water garden. For this reason also, the depth of the NSP is not tied to the chosen building method.

Although you have to reference the „FLL- recommendations for private Swimming and Bathing ponds (2006)“ there's still room for a user-dependent adaption of the depth. It's possible to create shallow water zones especially for little children. The most shallow private NSP, for example, is only 80 cm deep. In contrast, the deepest BioNova NSP was built for a diver and is 4 meters deep.

Number of bathers

The user groups, and especially the number of users, will be very important in the planning process. The amount of use that the NSP gets will directly affect the amount of phosphate in the system, which must be kept within a certain range. There is a series of computational models available to determine how resilient the NSP will be. However, such calculations will not be quite as important for private pools as they would be for public pools because the bather load will be significantly lower.

Design of the NSP

Although mentioned here last, the personal wishes of the building owner are a basic factor in planning an NSP. A basic distinction must be made between natural and unnatural architectural installations.

Natural designs will include curved, non-linear shapes. It is especially important to create a smooth transition between the pond areas and the rest of the landscape. In order to achieve a harmonious overall picture, it is advantageous to use plants that can grow both in marshy areas as well as in drier areas. You can use a simple trick for this transition: Use plants that have similar looking varieties that grow in wet and dry soils. For example, *Iris laevigata* grows in wet soil and *Iris spuria* (of the same genus) grows in dry soils. A similar plant is *Caltha palustris*.

In architectural swimming pools with clean lines and right angles, the design possibilities are nearly limitless. You can fit quite different vegetation aesthetics within the same small space, provided it is designed with an artistic eye. In addition, a geometrically-shaped NSP is easier to maintain than a more naturalistic one due to its straight boundaries; you can employ a vacuuming robot to do most of the work.

You also have to think about the various additional features that can be implemented in the design of an NSP to enhance functional and aesthetic appeal. For example: ladders, entry steps, diving platforms (observe safety distances and water depths mandated by law!), lighting, bubbler / oxygenator, water current for exercise purposes, source rocks (from which water seeps), and streams.

The suitable BioNova building method

As you can see, the building of an NSP has to be carefully considered. Only after answering all the basic questions can the BioNova experts find your individual NSP solution.

Feel free to contact your local BioNova expert to help you find the right BioNova NSP for you! To find the contact information for our worldwide Partners, please visit www.bionova.de.

Of course, you can also contact the BioNova Global Head Office at Günding / Dachau (Germany). Please don't hesitate to contact by Email (info@bionova.de), telephone (+49 (0) 8131 / 665651) or fax (+49 (0) 8131 / 354704).

BioNova Historical



At this point we want to present you the public biological BioNova NSP at Egling (Bavaria, Germany). This public NSP was completed in the year 2000. The previous pool was an old conventional public outdoor pool.

The old public pool was located at a little valley near the stadium. But the property was very small. After weighing the pros and cons, the local authority decided to build a new NSP at another property. All people of the county helped to build this NSP. Young and old people supported the project. After only one year, a beautiful, 1,900 square meter-sized public NSP was built.

The children enjoy the 25 meter-long swim lanes, where they can practice their favourite sport. Egling also founded a local public-pool society that runs the NSP and also cares for maintenance. Over 60 members have passed the lifeguard exams and now volunteer as lifeguards.

